

Delaware and Hudson Canal Company Gravity Railroad: 1845 Configuration



James Archbald. Oil on canvas, from a painting by Elliott, dated 1845,
copied by J. W. Raught, 1901. Collection of the Carbondale Historical Society and Museum, Inc.

By

S. Robert Powell, Ph.D.

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A History of the
Delaware and Hudson Canal Company
in 24 Volumes

S. Robert Powell, Ph.D., 1974
Indiana University, Bloomington, IN

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Acknowledgements

The 24 volumes in this series could not have been written without thirty years of enthusiastic support and guidance from John V. Buberniak, who shares the present author's interest in the history of the Delaware and Hudson Canal Company's Gravity Railroad and Canal.

It is with great pleasure, therefore, that I here (1) acknowledge the crucial role that John V. Buberniak has played in the writing of these books on the D&H, and (2) express my thanks to him for all that he has done to make these books possible.

Another Gravity Railroad historian to whom sincere thanks are due is the late W. E. Anderson, who was Assistant Engineer for the Delaware and Hudson Canal Company and Chief Engineer of the Delaware and Hudson Company for many years.

In 1895, W. E. Anderson brought into existence a map volume titled:

*Delaware and Hudson Canal Company.
Gravity Railroad / Carbondale to Honesdale, 1895.*

In March 1901, W. E. Anderson created a map volume titled:

*Delaware & Hudson Company's Railroad, Honesdale Branch,
Carbondale to Honesdale. March 1901.*

Using those maps, we have been able to identify and describe the five separate configurations (1829, 1845, 1859, 1868, and 1899) of the D&H rail line from Carbondale to Honesdale in the nineteenth and twentieth centuries.

S. Robert Powell
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Overview

The industrial revolution in America was born on October 9, 1829, in Carbondale, PA, when the first cut of Delaware & Hudson Gravity Railroad coal cars, loaded with mass produced anthracite coal, headed up Plane No. 1 out of Carbondale for Honesdale and to market in New York City.

Those cars, filled with anthracite coal from mines in Carbondale, traveled over 16 miles of railroad tracks, made up of eight inclined planes and three levels, to Honesdale, where the coal was transferred into canal boats and hauled 108 miles, through the D&H Canal, to the Hudson River.

Most of the coal that was sent through the D&H system in the course of the nineteenth century was shipped south on the Hudson River to the New York metropolitan market and to many ports on the Atlantic seaboard, north and south of New York. A large quantity of anthracite coal was also shipped up the Hudson River to Albany, and shipped through the Erie Canal to the American Midwest.

The mining, manufacturing, and transportation system that became operational on that day between the anthracite mines of the Lackawanna Valley and the retail markets for that coal on the eastern seaboard and in the American Midwest was the product of enlightened entrepreneurial, technological, and managerial thought on the part of the officers, managers, directors, and employees of the Delaware and Hudson Canal Company. That system, the first private sector million-dollar enterprise in American history, was, at the same time, the pioneer expression on this continent of mass production, a mode of production that would thereafter characterize industry in America and around the world.

Mass production, the revolutionary engine that made it possible for the D&H to launch its mining, manufacturing, and transportation system in Carbondale on October 9, 1829, and to perpetuate that system well into the 20th century, came into existence when it did and lasted for as long as it did because a body of employees

and managers, within the context of a community, of which both groups were a part, chose to work together for their mutual benefit and enrichment, to mass produce and market a commodity, and in so doing to implement the clearly articulated production and marketing objectives of “the company,” the Delaware and Hudson Canal Company.

In this 24-volume work on the D&H,* we will (1) document the history of that mining, manufacturing, and transportation system, with a special focus on the rail lines of the Delaware and Hudson Canal Company in northeastern Pennsylvania, from the opening of the D&H Gravity Railroad in 1829 to the anthracite coal strike of 1902; and (2) demonstrate that the history of that mining, manufacturing, and transportation system, the D. & H. C. Co., from 1829 to 1902, is, at the same time, not only an illustration of eight decades of fine tuning by the D&H of their mass production procedures and techniques but also a full-bodied expression and record, both from the point of view of the D&H and from the point of view of its employees, of the birth, development, and first maturity of the industrial revolution in America.

This is a success story, directed by America’s pioneer urban capitalists, and implemented by them and the tens of thousands of men, women, and children who emigrated from Europe to the coal fields of northeastern Pennsylvania in the nineteenth century to work for and with the D&H and to start their lives over again. This is a success story that is important not only within in the context of local, state, and regional history but also within the context of American history. It is a compelling story.

*The present volume focuses on the 1845 configuration of the Gravity Railroad. Each of these 24 volumes will focus on one aspect of the history of the Delaware and Hudson railroad, from the opening of the Gravity Railroad in 1829 to the anthracite coal strike of 1902. Each volume will be an autonomous entity and published separately.

Preface

In 1845, in order to meet market demands, the D&H not only extended its Gravity Railroad southward to Archbald in order to access additional coal deposits but also revised the 1829 configuration of its Gravity Railroad from Carbondale to Honesdale, which made it possible to ship more coal through the system than formerly.

Who were the people who made a reality the Delaware and Hudson Canal Company's Gravity Railroad in 1845? The two primary figures were James Archbald and Charles Pemberton Wurts.

James Archbald was surely the primary individual behind the layout that was completed in 1845. He was assisted by Charles Pemberton Wurts, who worked with Archbald for the ten-year period, 1843-1853. In 1853, when James Archbald moved to Scranton, C. P. Wurts assumed entire charge of the D&H's affairs, serving as chief engineer, 1853-1865.

Working together, James Archbald and C. P. Wurts made a reality the 1845 configuration of the Gravity Railroad. C. P. Wurts would later play a key role in the establishment of the 1856-58 configuration of the Gravity Railroad. C. P. Wurts, it will be recalled, was the nephew and adopted son of John Wurts, the third president of the D&H.

More about Charles Pemberton Wurts (1824-1892):

C. P. Wurts was one of the 13 children of George and Abigail Petitt Wurts. He was the nephew and adopted son of John Wurts, 3rd president of the D&H. Born in 1824 in Montville, NJ, he began working for the D&H at age 19' died in 1892. C. P. Wurts married Laura Jay in 1854. She was a granddaughter of Peter Augustus Jay and the great granddaughter of Supreme Court justice and diplomat John Jay. They had 6 children. Soon after his arrival in Carbondale, in 1843, he was appointed assistant to James Archbald, the general superintendent of the D&H, serving in that capacity until James Archbald removed to Scranton in 1853, when C. P. Wurts assumed entire charge of the D&H's affairs. About 1856, Charles Pemberton Wurts (a nephew of the D&H founders) and Maurice Wurts (another son of George Wurts and Abigail Petit, which made him as well a nephew of the D&H founders; from 1845 to 1855 he served as the paymaster or general disbursing agent of the Del. & Hudson Canal Company at Carbondale) plus members

of the Dickson and Pierson families moved to Scranton and erected a foundry and machine shop, known as Dickson & Co. (manufacture and repair of mining machinery—later Dickson Manufacturing Company). C. P. Wurts played a key role in the establishment of the 1856-1859 configuration of the roadbed of the D&H Gravity Railroad. At this time the D&H purchased sixteen 75-horse power engines from the Dickson Manufacturing Company, Scranton, for use on all planes. C. P. Wurts continued in charge of the Delaware & Hudson interests until 1864, when he was succeeded by Thomas Dickson. Upon the death of his Aunt Martha Potts Haskins Wurts (widow of former D&H Canal Company president, John Wurts) in 1861, C. P. Wurts was named the main beneficiary of her considerable estate, which caused some friction in the family. Upon his retirement C. P. Wurts went abroad with his family and spent several years in Europe. C. P. Wurts and his family moved to New Haven, CT in the mid 1877.

Obituary of C. P. Wurts that was published in the *Carbondale Leader*:

“CHARLES P. WURTS DEAD. / He Was Formerly Superintendent of the D. & H. and Lived Here. / Yesterday’s New York Tribune contained a brief notice of the death of Charles Pemberton Wurts, which occurred at Bar Harbor, Maine, August 11th in the sixty-ninth year of his age. / Just half a century ago Mr. Wurts came to this city [Carbondale] and for a time was a member of the Delaware & Hudson Canal company’s engineer corps. He was the nephew and adopted son of John Wurts, at that time president of the Delaware & Hudson Canal company. Soon after his arrival here he was appointed assistant to James Archbald, the general superintendent, serving in that capacity until Mr. Archbald removed to Scranton, when Mr. Wurts assumed entire charge of the company’s affairs in this locality. It was under his administration that the present gravity railroad was constructed and many changes made in the methods of transporting the product of the mines from the valley of the Lackawanna to the canal which at that time was the company’s only means of reaching New York city and tidewater. In those days Mr. Wurts was general manager of all the company’s business, and to him all differences were referred. The first great strike at the company’s collieries took place in 1857, when the miners made a demand for an advance of two and one-half cents per ton. The regular

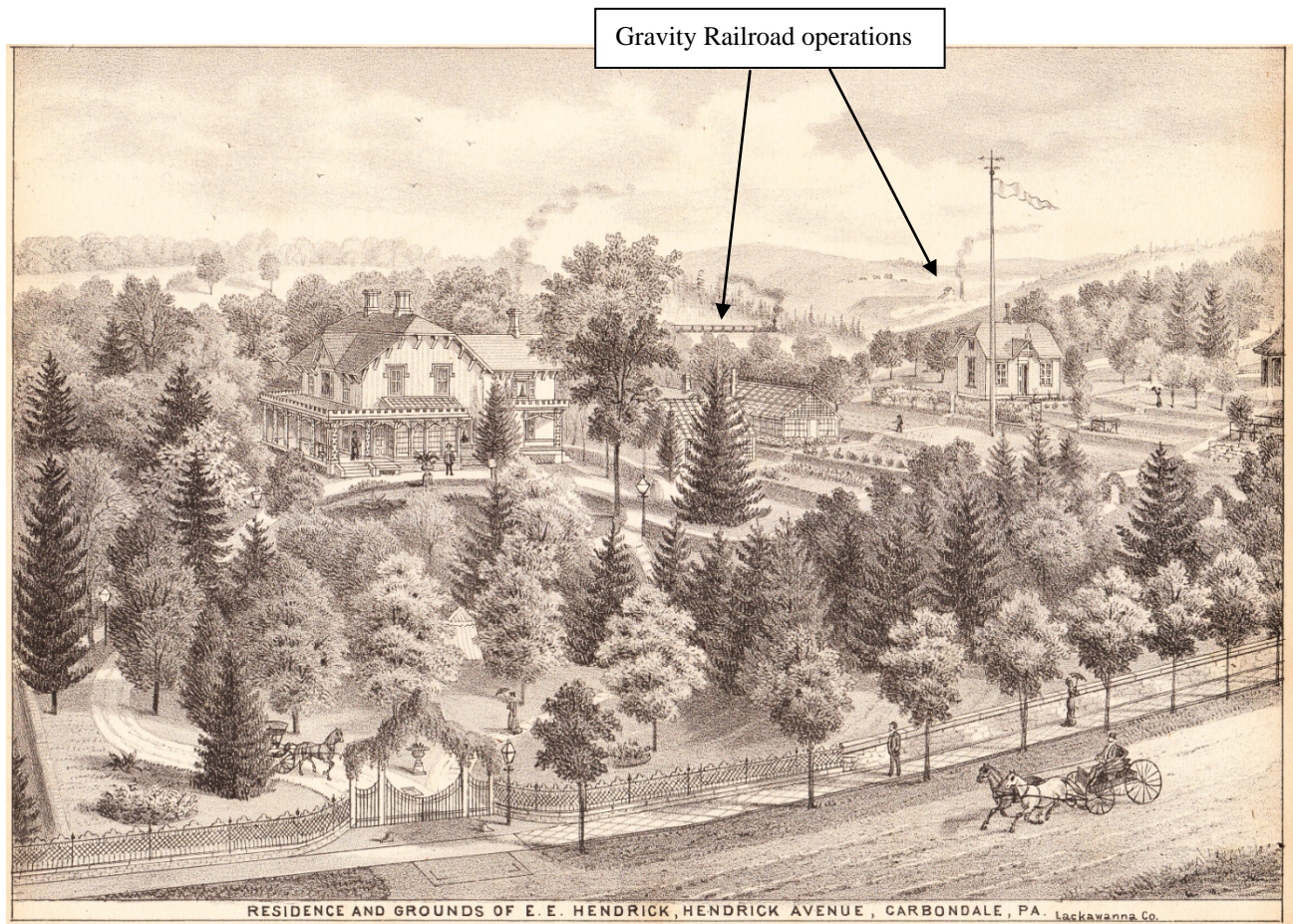
price for mining at that time was thirty-five cents. After several weeks of idleness the miners resumed work upon the promise of Mr. Wurts that the advance asked for would be given them when operations were resumed. This was the one condition fixed by Superintendent Wurts, the men took him at his word and had no reason to regret it. / Many of the old residents will remember how the miners congregated every afternoon on the hill east of Park street to talk over their differences and it was then Mr. Wurts met them and effected the settlement on which operations at the mines were resumed. / During his residence here Mr. Wurts built the house and reclaimed the grounds now owned and occupied by E. E. Hendrick. / From that year 1860 to 1863 Mr. Wurts was in partnership with W. H. Richmond in the Elk Hill colliery at Dickson City and about the same period he was associated with Edward Jones, Lewis Pughe, and Abel Barker in developing the mines at Olyphant. He was also identified with other industries in this locality and was known as a progressive business man of this community. He took an interest in local affairs and was always ready to assist in any movement to better the condition of the men in the employ of the Delaware & Hudson Canal company. / Mr. Wurts continued in charge of the Delaware & Hudson interests until 1864, when he was succeeded by Thomas Dickson. Upon his retirement Mr. Wurts went abroad with his family and spent several years in Europe. For the past fifteen years he has been a resident of New Haven, Conn. / Of the men who were actively engaged in coal operations during the years Mr. Wurts was general superintendent of the chief corporation of the Lackawanna valley, few are alive at present. Among the first operators who had contracts to ship coal over the Delaware & Hudson lines were William Brennan, J. Offerman, J. C. Chittenden, A. Eaton, George and John Simpson, Edward Jones, Lewis Pughe, Abel Barker, W. H. Richmond, J. J. Albright, G. L. Dickson, John Jermyn. Of this number only four are living and only two, Messrs. Richmond and Jermyn, are actively engaged in the coal business.” (*Carbondale Leader*, August 16, 1892, p. 4)

It was C. P. Wurts who had built on present-day Lincoln Avenue in Carbondale what would later become known as the Eli E. Hendrick House.

The C. P. Wurts House in Carbondale:

The C. P. Wurts House (later to become the Eli E. Hendrick house in Hendrick Park; property conveyed by deed from Thomas Sweet and Charlotte Sweet to Charles P. Wurts on April 20, 1852); house and grounds based on designs by Andrew Jackson Downing (commissioned in 1851 at an annual salary of \$2,500 to landscape the public gardens near the Capitol and the White House in Washington); grounds surrounding Wurts house planted by Alexander Shannon of Carbondale. Eli Hendrick became the owner of the C. P. Wurts house in 1865 (deed dated

June 16, 1865, from Charles P. Wurtz and Laura Wurtz, his wife, to Eli E. Hendrick). Payment for the house and grounds: Eli Hendrick traded C. P. Wurts \$100,000 of the stock of the Great Northern Oil Company for the Wurtz residence.



Engraving of the Residence and Grounds of E. E. Hendrick, Hendrick Avenue, Carbondale, PA (formerly C. P. Wurts residence), facing page 443, in *History of Luzerne Lackawanna and Wyoming Counties, PA. with Illustrations and Biographical Sketches of Some of Their Prominent Man and Pioneers*. 1880

1852

Officers of the D&H:

John Wurts, President; William Musgrave, Vice President; Isaac N. Seymour, Treasurer, and Gilead Smith, Secretary.

Managers of the D&H:

John Wurts, Maurice Wurts, William M. Hallsted, Lora Nash, Silas Holmes, Edward J. Woolsey, Jacob R. Le Roy, William Musgrave, William S. Herriman, George T. Olyphant, Charles N. Talbot, Daniel B. Fearing, and Robert Ray.

1854

Officers of the D&H:

John Wurts, President; William Musgrave, Vice President; Isaac N. Seymour, Treasurer; Gilead A. Smith, Secretary.

Managers of the D&H:

John Wurts, William M. Halstead, Silas Holmes, Jacob R. Leroy, William S. Herriman, Charles N. Talbot, Maurice Wurts, Lora Nash, Edward J. Woolsey, William Musgrave, George T. Olyphant, Daniel B. Fearing, Robert Ray.

More on John Wurts, whose portrait is given on the following page:

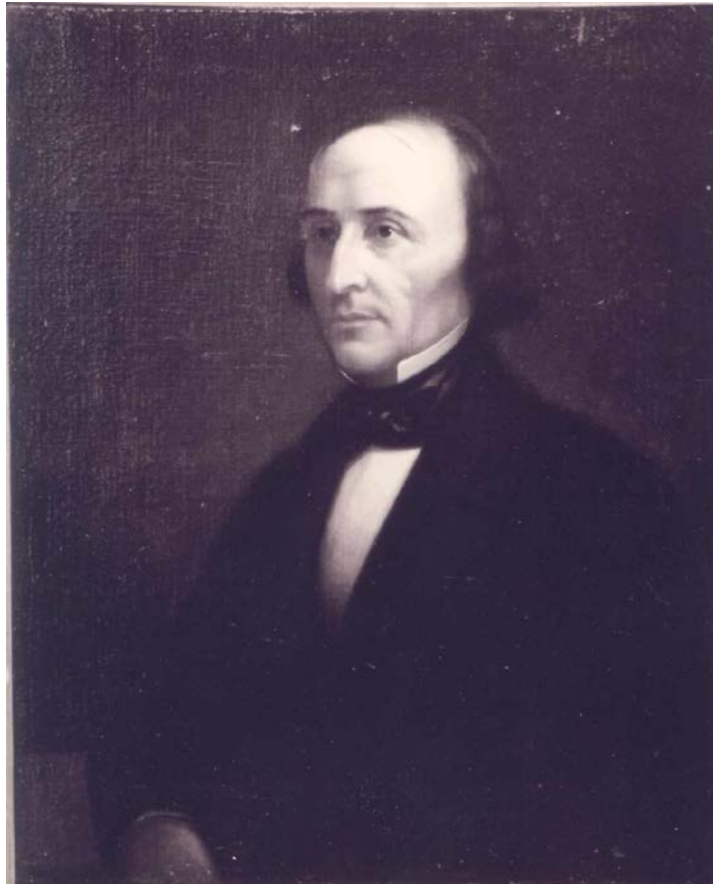
John Wurts was not in good health during the final years of his presidency and others, including his brother Maurice, acted as temporary president at times. On March 15, 1856, he resigned as president, to be succeeded ultimately by President George T. Olyphant. In the *New York Times* of April 3, 1858, we read: "'AT A MEETING OF THE STOCKHOLDERS of the DELAWARE AND HUDSON CANAL COMPANY, held at the office of the Company on Tuesday, March 30 1858 Mr. William Nelson was appointed Chairman and William M. Vermilye Secretary. / Mr. Olyphant, the President of the Company, presented and read the Annual Report and Statement of affairs of the Company for the past year, which on motion of Mr. Isaac C. Kendall, duly seconded, was accepted, unanimously adopted, and ordered to be printed under the direction of the Board of Managers. / The following preamble and resolutions, offered by Mr. Isaac C. Kendall, and seconded by Mr. Vermilye were unanimously adopted, ordered to be entered on the Minutes of the Company and published: / *Whereas*, Our late President, Mr. John Wurts, has felt obliged to resign his office as President of the Delaware and Hudson Company, on account of long-continued ill health; and / *Whereas*, The Stockholders of the said Company all agree that they have lost an able, faithful and judicious officer, whose fidelity, ability and integrity during an administration of twenty seven years, amid the most adverse circumstances, through which the Company in former years so successfully contended, as well as through the later years of its high prosperity, has never been questioned; and / *Whereas*, In the opinion of the Stockholders now assembled, at their first meeting after the retirement of Mr. Wurts, the Company is mainly indebted to him, aided by the able Board of Managers, for its ability in surmounting its trials in former years, and for its present high prosperity; therefore, / *Resolved*. That the cordial thanks of the Stockholders are hereby presented to Mr. Wurts, for his long and faithful services. / *Resolved*, That the Stockholders appreciate the high-minded, lofty, and strictly honourable course which has ever marked the administration of Mr. Wurts, and feel that it ought ever to be held in grateful remembrance. / *Resolved*; That the Stockholders cannot do justice to their own feelings without conveying to Mr. Wurts some evidence of their high appreciation of him as an officer and a man; therefore. / *Resolved*, That the Board of Managers be hereby requested to present to our late President such token of the approbation of the Stockholders as they may deem most appropriate, with a copy of these resolutions—and to procure for the use of the Company his portrait [emphasis added]. / The meeting then adjourned. / WILLIAM NELSON, Chairman. / Wm. M. Vermilye, Secretary."

The portrait of John Wurts:

"... and to procure for the use of the Company his portrait." The portrait given below is the only portrait of John Wurts that we have ever seen. It must be the portrait that was procured/commissioned at the time of his retirement.

John Wurts: third president of the D&H: April 13, 1831—March 15, 1858:

After 27 years as president, he resigned as president; he remained a Director until 1861; died at Rome on April 23, 1861.



John Wurts. Photograph in the collection of the Carbondale Historical Society and Museum, Inc.

We will learn more about all of the above people in the course of the present unit. For now, it's important to get their names before us. The D&H was a highly successful company, but it was first and foremost a body of people working together for their mutual benefit.

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Introduction

Many improvements were made to the D&H system (revision of existing rail lines, expansion of system) in the period 1841-45, plus or minus a year. We have chosen to focus on them as a whole under the heading “1845 Configuration.” In *Century of Progress* (p. 134), we read: “Actual alterations on the railroad commenced late in 1841 or early in 1842 and were prosecuted with little interruption through a portion of 1848.”

In 1841, a total of 192,207 tons of coal were transported over the D&H railroad and canal. It was very clear to the D&H that improvements had to be made to both the railroad and the canal in order to be able to market an increased quantity of coal.

A new configuration of the line from Carbondale to Honesdale was clearly necessary at this time.

James Archbald in his February 1847 report to President John Wurts says: “. . . the work necessary for the construction of our new road was commenced in 1842, and nearly completed in 1844. . . We have now a main road and machinery capable of sending to market five hundred thousand tons a year, or four hundred thousand tons more than was originally [in 1829] contemplated.”

In addition, the Gravity Railroad was extended to Archbald in 1845.

The building of the gravity road to Archbald in 1845 was the cause of the rapid development of the coal mines of the valley, and in 1860 Blakely township had doubled its population of 1850. Blakely Township was formed from parts of Providence and Greenfield in 1818. It was first settled by Timothy Stevens, who located near what is now Dickson City in 1786. Blakely Township was named after Captain Johnson Blakely, who commanded the American sloop of war 'Wasp' in her battle with the British sloop 'Avon' in 1814. In 1867 (August 27) Blakely borough was formed from the territory lying west of the Lackawanna River between the villages of Olyphant and Rushdale (Jermyn).

James Archbald

In 1829, James Archbald was named superintendent and resident engineer of the Gravity Railroad by John Jervis. James Archbald was the mastermind behind the revisions for the 1845 configuration.

Here is Hollister's description of James Archbald, the engineer, the man:

"In 1836-7 he [James Archbald] constructed new planes at Carbondale with the aptness and skill that gave him credit as an engineer and greatly facilitated the movement of coal cars. The road between the planes was originally built level, requiring horses to pull the cars back and forward between the head and foot. By devising and adopting the plan of inclination for the cars to run by their own gravitation he both cheapened and quickened transportation. / Leading an up and down

railroad over a mountain a thousand feet higher than the coal beds furnishing tonnage, with ascending and descending grades, was a stupendous undertaking in the infancy of railroad engineering. [Emphasis added] The present gravity road [the Hollister book is dated 1880] from Olyphant to Honesdale, emerging from the original of 1826 as engineered at that time the greater portion of the way by J. B. Jervis, was his earliest if not his highest achievement over the Pennsylvania Highlands. The fact is significant that the same general features instituted by engineer Archibald along this road in 1837 and in 1842-4 remain to-day unchallenged and unchanged. No man familiar with the history withholds the credit of its successful execution to James Archibald. Fruitful in expedients he was compelled to adopt, he promptly put in execution many features of his own creation which others deemed impossible. A man of few words, open, honest and sincere, he fraternized so readily with the workingmen under his superintendence that the man in and out of authority seemed as one, and yet everywhere and at all times he was esteemed for the accuracy of his judgment and the vigor of his intellect, and for his friendship for the industrious workingman. He was the foe to laziness. In the darkest days of the Company when its stock could have been purchased for half its original cost and labor, depressed and abundant, met with but reluctant reward, he recognized the interests of honest industry without sacrificing those of the Company. He clearly discovered that the true policy of the Company was not to seek sudden wealth but to encourage industry by giving it occupation and support." *Hollister*, unpublished typescript (p. 60)

Side Note: James Archbald was a Scot, as was John Bloomfield Jervis (12-14-1795—01-12-1885). Other D&H Scots include: Archibald Law, James Clarkson, Alexander Bryden, John Hosie, John Campbell, J. H McAlpine, James Dickson, Andrew Nicol, Archibald McNeal, and Andrew Wyllie. See "Scottish Realism and the Technological Innovations of the D&H in the Nineteenth Century" in the volume in this series on the 1859 configuration of the Gravity Railroad, pp. 12-27.

James Archbald's qualities as a man and his leadership skills were recognized by his contemporaries, who nominated him for Congress in 1866:

“James Archbald. / We have been amazed at the proceedings of the County Convention held at Wilkes-Barre on Tuesday last. It did many unexpected things, but we have been most astonished at the nomination of James Archbald, Scranton, for Congress! JAMES ARCHBALD—why! We have known him well for thirty years—and during the whole time his name has been a synonym for integrity and ability! It is passing strange for a County Convention to do anything so sensible as the nomination of such a man for Congress. The people have come to expect that Conventions should be a cabal of politicians fighting for spoils. But the Convention of Tuesday is surely a noteworthy exception. The delegates deserve well of their constituents and the people of this Congressional District, for showing a disposition to be governed by higher and nobler principles of action. / We say higher and nobler, upon the ground that country is of more consequence than party, and the interests of the whole people are of more value than the interests of any mere portion. / A nomination like that of Mr. Archbald is outside of and above the political arena. He

is of the people, and not of any political circle, and the nomination appeals not to partisan interests, but to the popular heart. He is, of all men among us, the most fitting representative of the material and industrial interests, the public enterprises, and the popular wants of this Congressional District. / Mr. Archbald was one of the early residents of our town, and over thirty years ago was placed in charge of the new Coal and Railroad business which had been recently started by the Del. & Hud. Canal Co. There were then few precedents to guide a Superintendent, but his main reliance was necessarily his own judgment and sagacity. Richly endowed with these, his administration was from the first a success, and success in the highest degree. The Company prospered beyond all of its competitors. Its stock was the most valuable and most sought for of any offered in the market. Upon the other hand, and it is a point of still more importance, labor was the best remunerated, and most promptly and regularly paid of any place then known in America. This last feature most fully illustrates the nature and character of the man. His interest and sympathy in the men in his employment seems paternal. It appears in all his actions and dealings with them. He enjoys their full confidence because they know he is their friend, and they cheerfully reciprocate the kindly feelings which he feels and manifests toward them. This state of things characterized his whole administration here under our observation, for a period of more than twenty years. We have never known or heard of any man employed by him that did not feel that he was treated fairly and justly. / Upon the incorporation of our city he was by the united voice of our people called to the office of Mayor, was three times re-elected, receiving the votes of all parties. / His marked success in conducting the business of the Del. & Hud. Canal Co. placing it in the foreground among its competitors attracted the attention of rival companies. His services were urgently sought for, and as the business of the Del. & Hud. seemed then to have assumed somewhat of a beaten track, others, projecting newer, more difficult and more comprehensive enterprises claimed that he could be spared from his position here, and ought to leave it and take one in which his very remarkable talent and sagacity would find wider scope, and enable him to be still more useful. These solicitations at length prevailed, and Mr. Archbald removed to Scranton to succeed Col. Scranton as General Agent in conducting the colossal business of the Del. & Lack. & Western Railroad Co. There, as with us, his administration has been crowned with complete success, and under his management, labor is liberally paid, those employed are industrious and faithful, thriving and prosperous. / We cannot farther sketch his distinguishing traits to-day, only to say that a very prominent one is modesty. He is averse to all pretention and display, and his calm equanimity seems never ruffled with pride or resentment. / We believe no man deserves so well of the people of this Congressional District, and none can serve us better in Congress. We shall support and vote for him, not as a Republican, not as a Democrat, not as a politician in any other partisan sense, but as James Archbald—with merit above and beyond any political party.” (*Carbondale Advance*, September 8, 1866, p. 2)

In the supplement to Glen Dietrick’s *History of Carbondale* we read the following about James Archbald’s position on the then popular superstitious belief about Friday as a workday:

“During Mr. Archbald’s superintendency, no mining was done to any great extent in the winter. On the opening of the canal in the spring, the first train of coal to go over the mountain was sent on Friday. If the road was not ready to do a full day’s work, the season was commenced with a

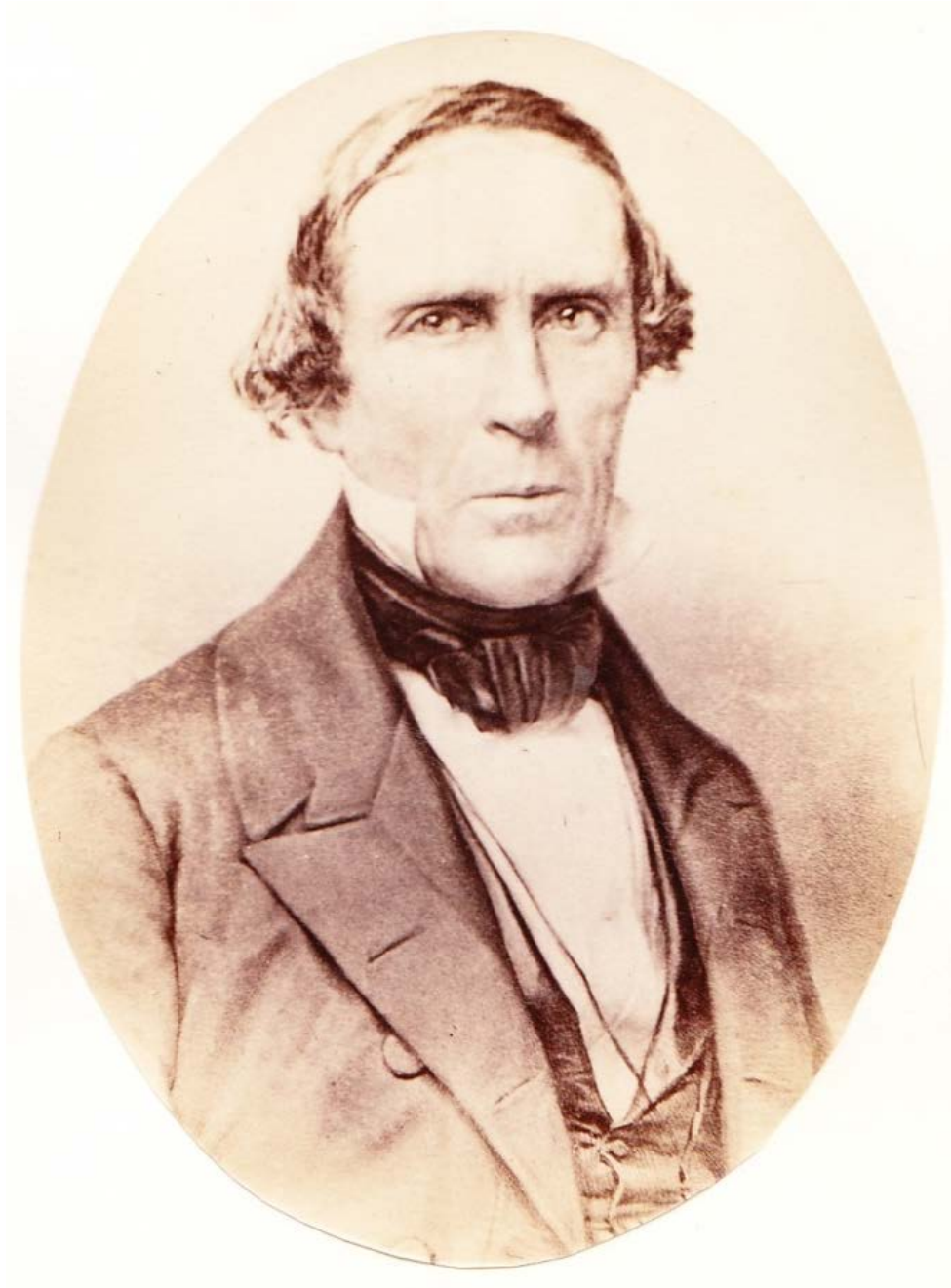
single trip being sent over. It is said that he never failed to start the season's work on Friday, so great was his opposition to the prevailing superstition that Friday is an unlucky day."

Biographies and Portraits of James Archbald:

1. *Clark*, pp. 159-161:

Given below is the photograph of James Archbald that accompanies the biographical portrait of James Archbald that constitutes Chapter XXX (pp. 159-161; photo facing p. 160) of J. A. Clark's *The Wyoming Valley, Upper Waters of the Susquehanna, and the Lackawanna Coal-Region, including Views of the Natural Scenery of Northern Pennsylvania, from the Indian Occupancy to the Year 1875* (Scranton: J. A. Clark, publisher, 1875).

Given below is the photograph of James Archbald that is given facing p. 160 in *Clark*:



Here is that biographical portrait of James Archbald from Clark's monumental work:

CHAPTER XXX.

JAMES ARCHBALD.

"With man, as with his friend, familiar us'd
To sit indulgent."

James Archbald was born in Ayrshire, in the West of Scotland, and on the shores of the Atlantic. This part of Scotland approaches near the North of Ireland, and communication between being frequent, the character of the Northern Irish somewhat resembles that of their Scottish neighbors. Here by the sounding sea, swept by the rude gales of the Western Ocean, and remote from the busy haunts of trade, the boyhood of young Archbald was passed. His father was one of the staunch yeomanry of a past era, a class of men peculiar to Scotland and rare now even there, a man of few words and much thought, who passed his life in the quiet pursuits of agriculture. His mother, however, was of a different character. Descended from that Wodrow, whose voice as a minister of Christ was heard raised in the stormiest period of Scottish church history, a grandchild of Wodrow the historian, and daughter of the minister at Eastwood, her mind was stored with rare knowledge, while she possessed grace and refinement of culture, and from the grand scenery of the coast drew that poetic inspiration shown in the artistic pursuits of her whole life. The subject of our sketch passed his early childhood, as most Scotch lads do, varying the care of the parental flock with driving his boat amid the restless currents of the Frith, or daringly swimming through the surfs and around the crags which line the coast, very much after the manner of Hugh Miller, at Cremarty. When about twelve years of age his father emigrated to America, and purchased a farm in the charming Mohawk Valley, in the

State of New York, where amid new-made friends and some valued Scottish acquaintances he passed the short remainder of his life.

No railroads nor canals then afforded means of transportation, and the great Mohawk Valley turnpike was the main artery of travel. At the age of fourteen years, young James to whom thus early was committed the transactions of such business, might be seen driving his wagon load of wheat down the turnpike to Albany, some forty miles distant, where he sold his grain with the good judgment of maturer years. As he advanced toward manhood he became engaged in the varied pursuits of farming, lumbering, and finally trading to the then far distant Canadian line. While there he received an offer from the Northwest Fur Company, which he came near accepting, which would have entirely changed the course of his life.

It must not be supposed that while thus actively engaged the cultivation of his mind was entirely neglected. He eagerly seized every opportunity for reading and study, became an ardent admirer of poetry, and could recite, even latterly, lengthy quotations from Burns and Byron, as well as most of the British poets. He was also a musician, and his inherited taste for fine arts made him a competent critic on artistic matters.

At this time the Erie Canal was commenced. This great work, which has linked to imperishable fame the name of Dewitt Clinton, its projector, opened a new field to Mr Archbald's energies. He became a contractor, and built

that section of the canal which destroyed the symmetry of his own beautiful farm, and, by the way, the old homestead was yet in his possession, and kept up with the reverence due the home of his parents and his own early days. His work as a contractor was well done; much to the surprise of the engineer, there were none of those attempts at cheating so common on politically managed improvements. The engineer in charge was the celebrated John B. Jervis, who, feeling pleased with the young man's faithfulness and capability, offered him a position on his engineering corps. Mr. Jervis was soon after offered the charge of the newly begun Delaware & Hudson Canal, and in the year 1825 Mr. Archbald was employed by him on it. He was placed under Mr. ———, an engineer somewhat noted for his *fast* qualities, who not finding any congeniality in the straightforward plodding assistant, asked his removal, on the ground that he would never make an engineer. Mr. Jervis at once assented, and to the general surprise made him Resident Engineer, in charge of that Division. Poor ——— consequently became his subordinate, but Mr. Archbald, true to his natural character, allowed no prejudice to prevail, but treated him kindly as long as he remained. In 1829, the newly opened mines and railroad at Carbondale being in their incipient stages of existence, the Directors elected Mr. Archbald as Superintendent, and since that time his life was principally passed in our valley.

Carbondale at this time was a new settlement. The nearest village of importance was Wilkes-Barre, on the Susquehanna, and between them lay Razorville (Providence) and Pittston Ferry. Slocum Hollow (Scranton) was nothing, and lay too far off the main road to be visited. The whole Lackawanna Valley was a partial wilderness. Blakely was a good lumber region, through which a miserable road led south, and the mineral wealth of the valley was generally unknown. Money was scarce in the beach woods, and the fact that the company paid it out liberally for their work, led to a large settlement at Carbondale. The Irish population was small and were generally a contented and hard-working people, having every confidence in the

liberality and justice of Mr. Archbald, whose ears were ever open to their wants. Some of the most influential of the foreign population of this section owe their rise to his kindness and appreciation.

Some seven or eight years after this, Wm. C. Bouck, Canal Commissioner and afterwards Democratic Governor of the State of New York, offered Mr. Archbald the position of Engineer in charge of that portion of the Erie Canal enlargement lying between Troy and Utica, a distance of 100 miles. This he accepted, and left Carbondale, much to the regret of the company and of the citizens of the place. But he did not stay long away. The strife and trickery of politics which prevailed among the canal authorities disgusted him, and at the earnest solicitation of the President of the Delaware & Hudson Canal Company he once more took charge of the road.

In 1847, the Pennsylvania Coal Company commenced building their railroad from Pittston to Hawley, and this, too was placed in charge of Mr. Archbald, and constructed upon his plans. This road has been run with few changes since he left it, and is considered a model for the economical transportation of coal.

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In 1854, Mr. Archbald was chosen Vice-President of the Michigan Southern and Northern Indiana railroad, and he once more and finally dissolved his connection with the Delaware & Hudson Canal Company and the Pennsylvania Coal Company, and took personal charge of the Western road. His stay in the West, however, was limited to a year, when he received his final recall to the scene of his early labors.

A new railroad was in progress, and mighty changes were taking place in the valley. The extension of the Delaware and Hudson Railroad had built up the village of Archbald, the business of the Pennsylvania Coal Company had made Dunmore, and now Slocum Hollow transformed into Scranton, has become the center of

the coal trade of the valley. The Hon. G. W. Scranton was compelled by ill health to abandon his position in the employ of the Delaware, Lackawanna and Western Railroad Company, and by the general voice of the Directors, Mr. Archbald was appointed General Agent. He now moved his residence to Scranton, leaving Carbondale (after a sojourn of about thirty years) much to the regret of her people, and followed by the good wishes of the entire population. Since 1858 Mr. Archbald was Chief Engineer of the Delaware, Lackawanna and Western Railroad, and also President of the Lackawanna & Bloomsburg Railroad, both of which positions he held at the time of his death. He had a competency—the proceeds of a life of industry, not a dollar having been made in speculation—but his active habits of life still forbade his retiring from his customary pursuits until near his death he possessed the elasticity and industry of younger days, rose with the early dawn, and on a tramp over the mountains could not be tired out by any man in Luzerne county.

Esteemed most by those who knew him best, Mr. Archbald had the entire confidence and affection of the railroad managers and employes.

The simplicity of his character, the purity of his life, and the uprightness of his dealings, have made his name a synonym for honesty.

He never failed in his word; he never refused a favor, nor harbored an enmity; he never solicited an office.

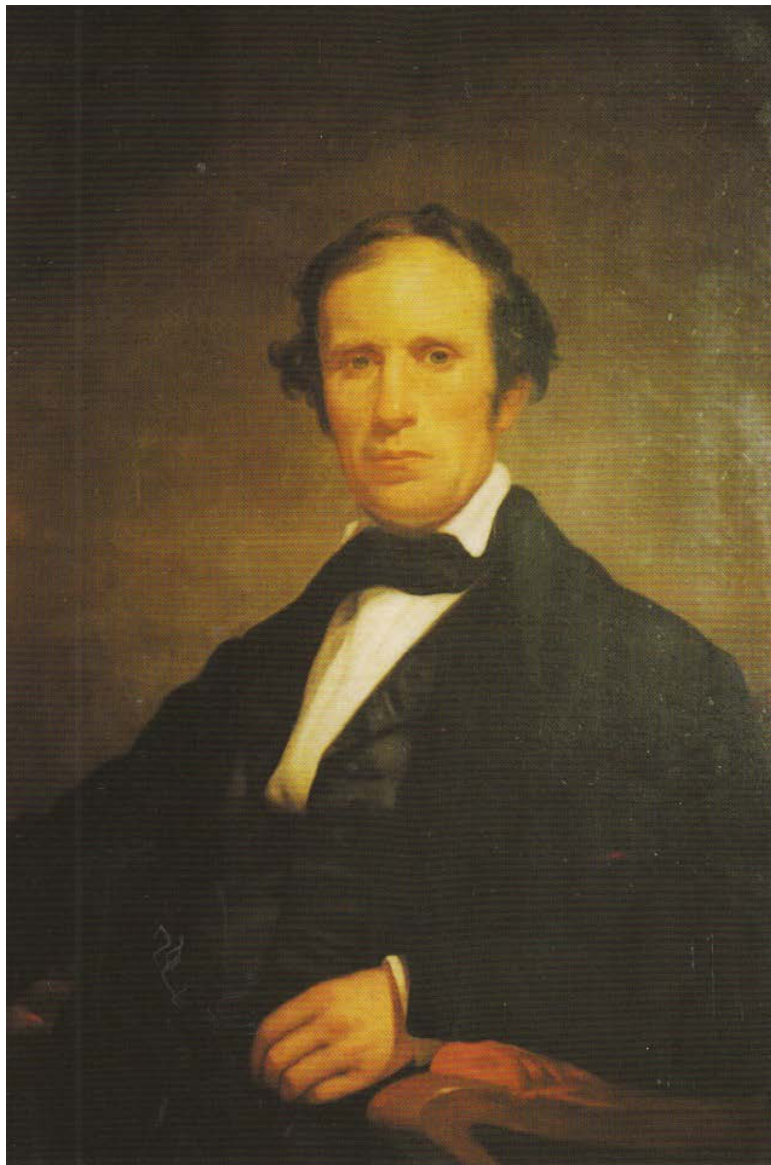
In 1866, Mr. Archbald reluctantly accepted the unanimous nomination of the Republican party for Congress, but was defeated by the

boldest naturalization frauds ever witnessed in this county. Personally, Mr. Archbald's inclinations were averse to running the gauntlet of this campaign, but the clamorous entreaties of his friends overbore his better judgment.

While Mr. Archbald was in charge of the Delaware & Hudson Railroad at Carbondale he conceived the plan of raising the road at the head of each plane, and lowering at the foot of the next, and in this way making a slight decline from the head of one plane to the foot of the next. As the road was before that constructed it was perfectly level between the planes and the cars were drawn back and forward from one to the other by horses. Mr. Archbald's plan was to make avail of the force of gravity by a slight inclination, so that the cars would run of themselves after being drawn up the planes by the stationary engines. He laid his proposition before the managers of the company, and with difficulty succeeded in getting permission to try it between planes Nos. 4 and 5. But so successful was this change when tried, that it was not only at once adopted along the whole line, but it was decided by Mr. Wurts, the President, not to mention the matter in his annual report, that the company might have full enjoyment and monopoly of the invention. This simple plan has been in use by the company ever since, and in 1847, when Mr. Archbald took charge of the constructions of the Pennsylvania Coal Company's road, he laid it out in the same way. He died at Scranton, August 26th, 1870. His remains were deposited in the cemetery at Dunmore.

2. See also the biographical portrait of James Archbald that is given in *Portrait and Biographical Record of Lackawanna County Pennsylvania*, pp. 712-714. In addition, we report additional information about James Archbald in section 4530, in this volume.

3. *The Honorable James Archbald, Mayor of Carbondale, 1851-1855*. Oil on canvas, 24 1/2" x 37 1/4", from a painting by Elliott, dated 1845, copied by J. W. Raught, 1901. Presented to the city of Carbondale by James Archibald's daughter, Mary Wodrow Archbald Catlin; painting now in the collection of the Carbondale Historical Society and Museum, Inc.



4. Newspaper accounts: final illness, death:

In 1850, James Archbald suffered an attack of erysipelas:

"JAMES ARCHBALD, ESQ., whose sudden attack with illness we mentioned some weeks since, continues still in a low and critical condition. His disease, the erysipelas, has been not only a dangerous but a very painful one. Great anxiety has been constantly felt by his friends, by the Company, and our entire community.—There has been a slight change for the better which has given rise to strong hope of recovery, and now especially, since the relapse produced by intelligence of the disasters of the flood has been successfully combated, and overcome. The care, toil and exposure sustained during many years' unremitting services in the post he has filled so long and well, as Chief Engineer and Agent of the Company here, have doubtless compelled his remarkable powers of constitution somewhat to yield. It is much to be hoped that its energies may rally and present encouraging symptoms continue." (*Lackawanna Citizen and Carbondale Democrat*, July 26, 1850, p. 3)

The death of James Archbald in 1870:

"**Death of Hon. James Archbald.** / A Telegram just received from J. J. Albright, Esq., of Scranton to Hon. J. M. Poor of this city, announces the death of Hon. James Archbald, at his residence in that city on this (Friday) morning. Funeral on Monday next at 4. P. M.—The deceased was for several years Mayor of our city, one of our earliest and most respected citizens, and for many years superintendent for the Del. & Hud. C. Co. at this point. He has been for more than thirty years greatly respected and beloved throughout North Eastern Pennsylvania. / The hour for the funeral has probably been named in reference to the arrival of the New York Passenger train at Scranton, but is a very inconvenient one for our people that may desire to attend." (*Carbondale Advance*, August 27, 1870, p. 3)

His death, as reported in the Scranton Republican of August 27:

"**HON. JAMES ARCHBALD.** / In the death of Mr. Archbald at his residence in this city yesterday [August 26, 1870], the Lackawanna Valley has lost one of its pioneer and representative men. Mr. Archbald has been prostrated by general debility for some time past, and at last has sunk to rest at the ripe old age of 75. / James Archbald was born in Ayrshire, in the West of Scotland, and on the shores of the Atlantic. This part of Scotland approaches near the North of Ireland, and communication being frequent, the character of the Northern Irish somewhat resembles that of their Scottish neighbors. Here, by the sounding sea, swept by the rude gales the Western Ocean, and remote from the busy haunts of trade, the boyhood of young Archbald was passed. His father was one of the staunch yeomanry of a past era, a class of men peculiar to Scotland and rare now even there, a man of few words and much thought, who passed his life in the quiet pursuits of agriculture. His mother however, was of a different character.

Descended from that Wodrow whose voice as a minister of Christ was heard raised in the stormiest period of Scottish church history, a grandchild of Wodrow the historian, and daughter of the minister at Eastwood, her mind was stored with rare knowledge, while she possessed grace and refinement of culture, and from the grand scenery of the coast drew that poetic inspiration shown in the artistic pursuits of her whole life. The subject of our sketch passed his early childhood as most Scottish lads to, varying the care of the parental flock with driving his boat amid the restless currents of the Firth or daringly swimming through the surfs and around the crags which line the coast, very much after the manner of Hugh Miller at Cromarty. When about twelve years of age his father emigrated to America and purchased a farm in the charming Mohawk Valley, in the State of New York, where amid newmade friends and some valued Scottish acquaintances he passed the short remainder of his life. / No railroads or canals then afforded means of transportation, and the great Mohawk valley turnpike was the main artery of travel. At the age of fourteen, young James, to whom thus early was committed the transactions of such business, might be seen driving his wagon load of wheat down the turnpike to Albany, some 40 miles distant, where he sold his grain with the good judgment of maturer years. As he advanced toward manhood he became engaged in the varied pursuits of farming, lumbering and finally trading to the then far distant Canadian line. While there he received an offer from the Northwest Fur Company which he came near accepting, and which would have surely changed the course of his life. / It must not be supposed that while thus actively engaged the cultivation of his mind was entirely neglected. He eagerly seized every opportunity for reading and study, he became an ardent admirer of poetry, and could recite even latterly lengthy quotations from Burns and Byron, as well as most of the British poets. He was also a musician, and his inherited taste for the fine arts made him a competent critic on artistic matters. / At this time the Erie Canal was commenced. This great work, which has linked to imperishable fame the name of DeWitt Clinton, its projector, opened a new field to Mr. Archbald's energies. He became a contractor, and built that section of the canal which destroyed the symmetry of his own beautiful farm, and, by the way, the old homestead was yet in his possession, and kept up with the reverence due the home of his parents and his own early days. His work as a contractor was well done; much to the surprise of the engineer, there were none of those attempts at cheating so common on politically managed improvements. The engineer in charge was the celebrated John B. Jervis, who, feeling pleased with the young man's faithfulness and capability, offered him a position in his engineering corps. Mr. Jervis was soon after offered the charge of the newly begun Delaware & Hudson Canal, and in the year 1825 Mr. Archbald was employed under him. He was placed under Mr. _____, an engineer somewhat noted for his *fast* qualities who not finding any congeniality in the straightforward plodding assistant, asked his removal, on the ground that he would never make an engineer. Mr. Jervis at once assented and to the general surprise made him President Engineer, in charge of that division. Poor _____ consequently became his subordinate, but Mr. Archbald, true to his natural character, allowed no prejudice to prevail, but treated him kindly as long as he remained. In 1829 the newly opened mines and railroad at Carbondale being in their incipient stages of existence, the Directors elected Mr. Archbald as Superintendent [born March 3, 1793, Archbald would have been 37 when he became Superintendent of the D&H Gravity Railroad and mines in 1830 and not "in his late twenties" as *Lowenthal* states on p 150. In May 1830, John Jervis resigned as Chief Engineer of the entire system and recommended

that James Archbald be put in charge of the railway and mines and that Russel F. Lord be put in charge of the canal.], and since that time his life has been principally passed in our valley. / Carbondale at that time was a new settlement. The nearest village of importance was Wilkes-Barre, on the Susquehanna, and between them lay Razorville and Pittston Ferry. Slocum Hollow (Scranton) was nothing, and lay too far off the main road to be visited. The whole Lackawanna Valley was a partial wilderness. Blakely was a good lumber region, through which a miserable road led south and the mineral wealth of the valley was generally unknown. Money was scarce in the beech woods, and the fact that the company paid it out liberally for their work, led to large settlement at Carbondale. [emphasis added] The Irish population was small, and were generally a contented and hard-working people, having every confidence in the liberality and justice of Mr. Archbald, whose ears were ever open to their wants. Some of the most influential of the foreign population of this section owe their rise to his kindness and appreciation. / Some seven or eight years after this, Wm. C. Bouck, Canal Commissioner, and afterwards Democratic Governor of the State of New York, offered Mr. Archbald the position of Engineer in charge of that portion of the Erie Canal enlargement between Troy and Utica, a distance of 100 miles. This he accepted, and left Carbondale, much to the regret of the company and of the citizens of the place. But he did not stay away long. The strife and trickery of politics which prevailed among the canal authorities disgusted him, and at the earnest solicitation of the Delaware and Hudson Canal Company he once more took charge of the road. / In 1847, the Pennsylvania Coal Company commenced building their railroad from Pittston to Hawley, and this, too, was placed in charge of Mr. Archbald, and constructed under his plans. This road has been run with few changes since he left it, and is considered a model for the economical transportation of coal. / About this time Carbondale was made a city, and the citizens thereof, to show their respect and attachment, elected him Mayor, which office he held for four successive terms, and until he removed from the place. / In 1854, Mr. Archbald was chosen Vice-President of the Michigan Southern and Northern Indiana railroad, and he once more and finally dissolved his connection with the Delaware & Hudson Canal Company and the Pennsylvania Coal Company, and took personal charge of the Western road. His stay in the West, however, was limited to a year, when he received his final recall to the scene of his early labors. / A new railroad was in progress, and mighty changes were taking place in the valley. The extension of the Delaware and Hudson R. R. had built up the village of Archbald, the business of the Pennsylvania Coal Company had made Dunmore, and now Slocum Hollow was transformed into Scranton, has become the center of the coal trade of the valley. The Hon. G. W. Scranton was compelled by ill health to abandon his position in the employ of the Delaware Lackawanna and Western Railroad Company, and by the general voice of the Directors Mr. Archbald was appointed General Agent. He now moved his residence to Scranton, leaving Carbondale (after a sojourn of over 30 years), much to the regret of her people, and followed by the good wishes of the entire population. Since 1858, Mr. Archbald has been Chief Engineer of the Delaware, Lackawanna & Western Railroad, and also president of the Lackawanna and Bloomsburg Railroad [elected President on January 22, 1869 to serve for one year], both of which positions he held at the time of his death. He had a

competency—the proceeds of a life of industry, not a dollar having been made in speculation—but his active habits of life still forbade his retiring from his customary pursuits. Until quite recently he possessed the elasticity and industry of younger days, rose with the early dawn, and on a tramp over the mountains could not be tired out by any man in Luzerne county. / Esteemed most by those who knew him best, Mr. Archbald had the entire confidence and affection of the railroad managers and employes. / The simplicity of his character, the purity of his life, and the uprightness of his dealings, have made his name a synonym for honesty. / He never failed in his word; / He never refused a favor nor harbored an enmity; / He never solicited an office. / In 1866 Mr. Archbald reluctantly accepted the unanimous nomination of the Republican party for Congress, but was defeated by [one of] the boldest naturalization frauds ever witnessed in this county.[See article below on September 8, 1866 issue of Carbondale Advance, where James Archbald is nominated for Congress.] Personally, Mr. Archbald's inclinations were averse to running the gauntlet of this campaign, but the clamorous entreaties of his friends overbore his better judgment. / So, steadily but surely does the Destroying Angel thin the ranks of that generation; it behooves the young men of to-day to imitate the virtues of their predecessors, and prepare to bear the responsibilities bequeathed by them." (*Carbondale Advance*, September 10, 1870, p. 2)

The Archbald red Scottish granite obelisk and tombstones in Dunmore Cemetery:

Photograph by S. Robert Powell on Saturday, August 31, 2013: Many other members of the Archbald family, in addition to the six mentioned here, are interred in the Archbald family plot in Dunmore Cemetery.



Left to right:

- | | |
|----------------------------------|---|
| 1. Augusta Frothingham Archbald | daughter of James and Sarah Archbald |
| 2. Elizabeth Archbald | daughter of James and Sarah Archbald |
| 3. James Archbald | D&H/Mayor of Carbondale |
| 4. Sarah Augusta Temple Archbald | wife of D&H/Mayor of Carbondale |
| 5. James Archbald | son of James and Sarah Archbald |
| 6. Maria H. Albright | wife of son of James and Sarah Archbald |

James Archbald and his wife, Sarah Augusta Temple, were the parents of seven children:

1. James (born February 13, 1838 in Carbondale, died October 4, 1910 in Venice, Italy; civil engineer, Civil War Captain 132 PA Volunteers, Chief Engineer of DL&W, 1870-1899, a director of Oral School and trustee and VP of Albright Memorial Library)
2. Mary Wodrow (born June 16, 1840 in Carbondale, died 1904 in Scranton; married September 4, 1867 in Scranton to George Catlin, President of Scranton Third National Bank. He willed his house and estate to the Lackawanna Historical Society)
3. Thomas Frothingham (born July 23, 1843 in Carbondale, died February 16, 1882 in Corning, NY, contractor)
4. Augusta (born March 19, 1846 in Carbondale and died March 9, 1873 in Scranton)
5. Robert Wodrow (born September 10, 1848 in Carbondale and died August 19, 1926 in Scranton, lawyer and judge, married Elizabeth Baldwin Cannon on January 21, 1875 in Oxford, NY))
6. a son who died in infancy (born January 1st, 1834, died January 4, 1834)
7. Elizabeth, who died at age 12 (born June 19, 1835, died Oct 1, 1847)

Here are the inscriptions:

(1)
Augusta
Frothingham
Daughter of
James and Sarah Augusta Temple Archbald [Nos. 3 and 4 below]
Born
March 19, 1846
Died
March 9, 1873

(2)

Elizabeth

Oldest daughter of

James and Sarah Archbald

[Nos. 3 and 4 below]

Born

June 19, 1835

Died

Oct 1, 1847

Infant Son

Of

James and Sarah Archbald

[Nos. 3 and 4 below]

Born Jan'y 1st, 1834

Died

Jan'y 4th, 1834

(3)

James Archbald

[Mayor of Carbondale]

Born in

[Little Cumbrae]

Ayrshire, Scotland

March 3, 1795

[should read "1793"]

Died

[Scranton]

August 26, 1870

(4)

Sarah Augusta Temple Archbald

[wife of No 3, above]

Wife of James Archbald

[married on November 27, 1832 in Sand Lake, NY]

Born in

Hudson, N.Y.

Sept. 14th 1805

Died in

New York

[24th Street, NYC]

July 5, 1874

(5)

James

Archbald

[son of Nos. 3 and 4, above]

Born in

Sand Lake, N. Y.

[Archbald papers say he was born in Carbondale, PA]

Feb. 13, 1838

Died in Venice Italy

Oct 4, 1910

(6)

Maria H. Albright

daughter of Joseph J. Albright and Elizabeth Sellers]

Wife of

[married in Scranton, January 25, 1865]

James Archbald

[No. 5, above]

Born

[Archbald papers say was born in Scranton, PA]

August 3, 1841

Died

[Archbald papers say she died in Scranton, PA]

March 11, 1915

[Archbald papers say she died about 1910]

More on James, Mary W., and Robert Wodrow Archbald from Volume 14, No. 2, May 1981 of the *Bulletin of the Lackawanna Historical Society*:

James and Sarah Archbald were the parents of seven children, viz. James, Mary, Augusta, Thomas and Robert W. plus a son who died in infancy and a daughter Elizabeth who died at age 12. Augusta never married and lived at home and Thomas became a railroad contractor at Corning, N.Y. The lives of the other three James, Mary & Robert W. will be noted in detail.

1. **James Archbald** born 1838 and died 1910 was graduated from Union College and served as a Captain during the Civil War. Like his father, he became the Chief Engineer of the D. L. & W. Railroad, serving in that capacity from 1870 until 1899. He engineered the extension of the D.L. from Binghamton to Buffalo, N.Y. Later he made surveys for railroads in West Virginia and Mississippi and was involved in the paving of many of Scranton's streets. He married Maria H. Albright 1841-1915 the daughter of Joseph J. Albright of Scranton. They lived in a large home at 424 Jefferson Avenue and were the parents of six children as follows: James, a coal operator at Pottsville, Pa.; Joseph who lived in Buffalo, N.Y. Elizabeth who married Atty. John C. Kerr of Englewood, N.J.; Thomas a Presbyterian clergyman; Augusta who married John H. Brooks, a prominent Scranton stock broker and Ruth who married Halstead Little a banker in Englewood, N.J. and who is still living at age 97. Jennie who was the wife of Rev. Thomas Archbald above, was an early Girl Scout leader in Scranton and in her honor "Camp Archbald" the Scranton Girl Scout summer camp near Brooklyn, Pa. was named. Mary Brooks one of the daughters of Augusta Brooks above, married A. Whitney Griswold, who served as President of Yale University.

2. **Mary W. Archbald** born 1840 and died 1902 married George H. Catlin 1845-1936. He became a prominent Scranton banker, serving as one of

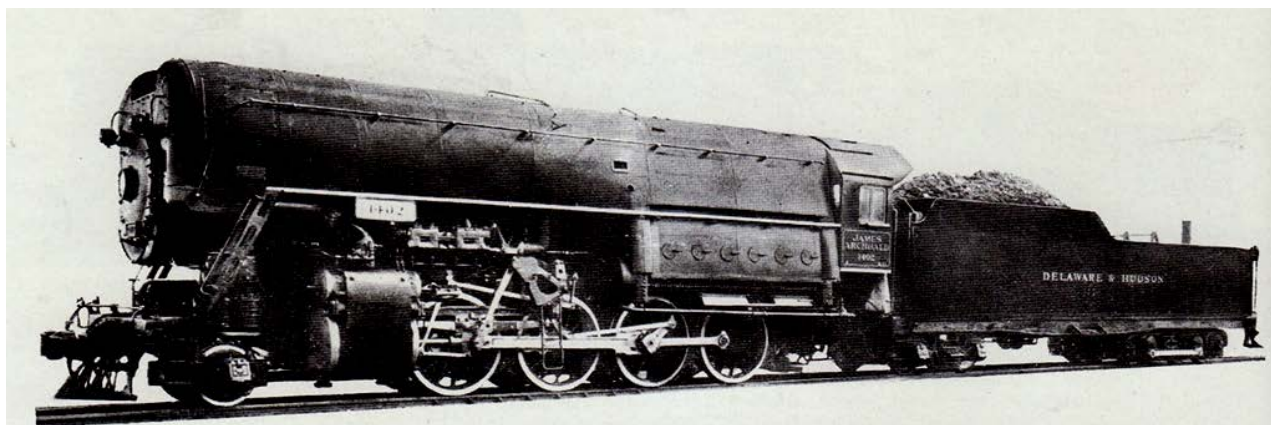
the organizers and Vice President of the Third National Bank for 65 years. They lived in her parents home on Ridge Row and had no children. After her death he married again to Helen Walsh and in 1912 they built the Catlin House which they generously bequeathed to the Lackawanna Historical Society.

3. **Hon. Robert Woodrow Archbald** born 1848 and died 1926 was graduated from Yale University and admitted to the Bar in 1873. He was elected to serve as a Judge in the Courts of Lackawanna County in 1885 where he presided with distinction until 1901 when he was appointed as the First Federal Judge of the U.S. District Court, serving there until 1913, a total of 28 years on the Bench. Judge Archbald was a nature lover and deeply interested in this Historical Society. He married Elizabeth Cannon 1850-1923 of Oxford, N.Y. and they lived at 236 Monroe Avenue in a large home adjacent to the Catlin House. They were the parents of three children: Robert W. Anna and Hugh Archbald.

Most of the members of this prominent and interesting family lie buried in the Dunmore Cemetery under a large monument of red Scottish granite. The family were all strong Presbyterians in their religious faith. This is a brief record of a significant family whose members made lasting contributions to the life of this area and though there are no descendants now living in this county, the family name lives on in the Borough of Archbald, Camp Archbald and Archbald Street in Scranton.

William P. Lewis

James Archbald's importance in the history of the D&H, which was recognized in his lifetime, was also commemorated by the D&H in 1930 when a splendid new 2-8-0 locomotive made by the American Locomotive Company was named the *James Archbald*. (*Railroadians*. . . , p. 94)



JAMES ARCHBALD

Built by American Locomotive Company in 1930. Type 2-8-0. Gauge of Track 4'8½". Cylinders, Diameter High Pressure 20½", Low Pressure 35½", Stroke 32". Driving Wheel Diameter 63". Boiler, Water Tube Type, Diameter 68-1/16", Pressure 500 Pounds. Fire Box, Length 151-15/16", Width 77-¾". Tubes, Superheater 52, Diameter 5½", Length 15'0", Regular 155, Diameter 2", Length 15'0". Wheel Base, Driving 18'0", Engine 29'0", Engine and Tender 80'½". Weight in Working Order: Leading Truck 56000 Pounds, Driving 300000 Pounds, Engine 356000 Pounds, Engine and Tender 582600 Pounds. Fuel, Bituminous. Heating Surface: Tubes 1209, Flues 1116, Fire Box 1048, Arch Tubes 66, Total 3439 Square Feet, Superheater 1037 Square Feet. Tractive Power: Simple at 500 Pounds Boiler Pressure 85800 Pounds, Compound at 500 Pounds Boiler Pressure 71600 Pounds. Tender Booster at 250 Pounds Boiler Pressure 18000 Pounds. Tender Capacity, Water 14000 Gallons, Fuel 17½ Tons.

The Honorable James Archbald had a son, James, who was born in 1838 and died in 1910:

James Archbald was born Feb. 13, 1838, at Sand Lake, N. Y., and graduated from Union College, Schenectady, N. Y., in 1860, when he received an appointment as assistant engineer on the Delaware, Lackawanna & Western R. R. In 1862, he entered the Union Army as captain in the 132nd Pennsylvania Infantry, in which capacity he served through numerous engagements, including the battle of Antietam. Returning to civil life, he practiced his profession as an engineer, and, in 1870, succeeded his father as chief engineer of the Delaware, Lackawanna & Western R. R., a position in which he had charge of the construction of the Bergen tunnel and its approaches at Hoboken, N. J., and the extension of the railroad for 200 miles, from Binghamton to Buffalo, N. Y. He retained his connection with this railroad company until 1899. From 1892 to 1900, he was also President of the Albright Coal Co., of Pottsville, Pa., and was for some years connected with the Barber Asphalt Paving Co. In the winter of 1900, Mr. Archbald directed the survey connecting the various independent collieries of the Wyoming region with the Erie & Wyoming Valley R. R. Later, he had charge of the survey of this line across the Alleghenies into West Virginia, and the connection of the West Virginia Central & Pittsburgh R. R. with tide-water. He also directed, in the State of Oregon, the survey of a line from San Luis harbor across the Coast and Cascade ranges. In 1905, he became chief engineer of the Mississippi Central R. R., and accepted, soon after, the same position with the Natchez & Eastern R. R. But in 1907, he was obliged to retire from active work; and he died Oct. 5, 1910, from heart-failure, in Venice, Italy. Mr. Archbald became a member of the Institute in 1887, and participated with much enthusiasm in several of its excursions and meetings, notably at London, Mexico City, and Denver. He was also a member of the American Society of Civil Engineers, and a charter member of the Engineers' Club of New York. His fellow-citizens of Scranton, Pa., where he occupied many positions of trust in connection with educational, financial, and social enterprises, justly regarded him as one of the leading pioneers in the development of that region and his well-won reputation as an engineer, together with his estimable personal character, cannot fail to cause his departure to be mourned by a wide circle of colleagues and friends. (*AMERICAN INSTITUTE OF MINING ENGINEERS. MONTHLY BULLETIN*, No. 50, FEBRUARY, 1911)

4503

The 1845 Roadbed

James Archbald's Report to President John Wurts, February 5, 1847:

A highly important and reliable document in which precise historical details about the Gravity Railroad are recorded by a knowledgeable first-person witness is the report that James Archbald submitted to D&H President John Wurts on the Gravity Railroad for the period 1829-1847.

That report is contained in the article by Dr. Edward Steers titled "The Delaware & Hudson Canal Company's Gravity Railroad" that was published in Volume II, March 26, 1983 of *Proceedings of the Canal History and Technology Symposium*, pp. 129-203.

The source of James Archbald's report to John Wurts of February 5, 1847, we learn from reference 20 in the article by Dr. Steers, is: Supreme Court of Ulster County, *The President, Managers and Company of the Delaware and Hudson Canal vs. The Pennsylvania Coal Company: Pleadings and Testimony Taken Before Judge J. H. Dubois, Referee*, New York, 1858.

James Archbald's 1847 report is cited repeatedly herein in the volumes on the 1829 configuration and the 1845 configuration of the Gravity Railroad.

Hollister speaks on the need for a railroad that could carry a larger quantity of coal to the canal:

"The demand for coal was steadily increasing. In 1829, 7000 tons of Lackawanna anthracite was borne from Carbondale; in 1841, 192,207 tons. This [i.e., the increasing demand] being beyond the ordinary working capacity of both the Canal and the Railroad, the Board of Managers in September 1842 adopted a plan to enlarge the Canal and change the road somewhat. The mechanical skill of Engineer Archbald was called into requisition to remedy the latter. Instead of a single track so arranged that cars could pass each other at regular points, a light and a loaded track independent of each other was constructed. The location as well as the entire arrangement of the road was changed. Machinery and water power took the place of horses, which were found to be too expensive and slow. Locomotive steam engines were proposed, but this kind of power required a kind of road that would involve a large outlay of capital to make it safe and sufficient through such a country." (unpublished typescript, 1880, of Hollister's history of the D&H, pp. 60-61):

James Archbald:

"After careful consideration and examination of the ground over which we had to go, in order to be fully satisfied of its fitness for what would be required, I proposed the present plan of road; which though, entirely novel in its arrangements for the return of empty cars, received the sanction of the Board and was adopted." These improvements began in 1842; completed in 1844 and cost \$328,890. (Report of James Archbald to John Wurts, February 5, 1847.)

Summary description of revisions for 1845 from Whiting:

"In 1842-45, under the direction of James Archbald, who succeeded Mr. Jervis as chief engineer, the entire location of the road from Carbondale to the summit, with the exception of plane Old No. 1, was changed. The number of planes remained the same, as well as the former summit and summit level. The original road was then followed to the head of Old No. 8; but it and the remainder of the old track to Honesdale were abandoned, and the present loaded track was built

between these points, on a descending grade of forty-four feet to the mile, thus utilizing the fall of Old No. 8, and making one continuous 'level' from the foot of Old No. 7 to Honesdale, a distance of ten miles. / The present empty or 'light' track, with a few deviations, was also built from Honesdale to Waymart, that is, the foot of Old No. 7. This necessitated the building of several new planes, those now known as Nos. 13, 14, 15 and 16, but it gave a separate road for each class of cars and so facilitated the handling of them. [This permitted horses to be dispensed with east of Waymart.] Water was used as the motive power on the new planes when practicable, that is, on Nos. 14, 15 and 16 [used until about 1860], the wheels being at the foot. During the same time, the road was extended southwest to Archbald." (*Cassier* article by Whiting)

Summary description of revisions for 1845 from *Mathews*:

"Instead of a single track, with turnouts, by which the cars could pass at certain points, a 'loaded' and a 'light,' or return track, entirely independent of each other, were constructed, the location, as well as the entire arrangement of the road, was changed and water-power and machinery took the place of horses which were found too slow and expensive. . . These improvements were begun in 1842 and for the most part completed in 1844, though minor ones have been made since, altogether increasing the carrying capacity of the road over thirty-fold." The improvements made between the years specified cost \$328,890.46. Simultaneously with the remodeling of the road, the canal was deepened one foot, so that boats of forty or fifty tons could as readily pass through it as twenty-five-ton boats could in the original channel." *Mathews*, p. 243.

Summary description of revisions for 1845 from E. D. LeRoy:

"During this period, between 1842-45, under the supervision of James Archbald, extensive improvements were made upon the gravity railroad in order to keep pace with the increased capacity of the canal. On the west side of the Moosic Mountains the location of the entire road, with the exception of Plane No. 1 was changed and a better grade, favoring the loaded cars, was obtained. On the east side of the mountain, Plane No. 6, which was originally the longest on the road, was divided into two separate planes; also an entirely new and separate track was built from the foot of Plane No. 7 to Honesdale, a distance of 10 miles. This was the greatest single improvement, for the original section, between Planes No. 7 and 8, had been single tracked with two turnouts or sidings. Here the loaded cars now not only had a continuous down grade of 10 miles, but it was no longer necessary to lower the loaded cars at Plane No. 8." (Part 6 of E. D. LeRoy's article).

Plane No. 6: Significant Modification in 1845:

1845: a new Plane 6 and a new Plane 7. In 1829, No. 6 was very long, about 3/4th mile long. In 1845, it was shortened, making it and No. 7 more or less the same length.

Clarification on what Whiting and LeRoy have to say about the 1845 configuration:

It is not accurate to say, as *Whiting* does, that “the entire location of the road from Carbondale to the summit [in the 1845 configuration], with the exception of plane Old No. 1, was changed. Similarly, E. D. LeRoy, in Part 5 of his series in the *Department of Internal Affairs Bulletin*, is incorrect when he says that on the Carbondale side of the Moosic Mountain “the location of the entire road, with the exception of Plane No. 1 was changed.”

Plane No. 1 and the inclined plane and the engine house on Plane No. 2, in the 1845 configuration, remained in the same location as in 1829. The level from the head of Plane No. 2 to the foot of Plane No. 3, however, as we will illustrate below, was in an entirely new location, as was the remainder of the roadbed to the summit of the mountain (and from there to Honesdale—all new).

D&H "Conveyor Belt" from Carbondale to New York City, Predates Henry Ford:

An interesting summary description of the 1845 configuration of the D&H Gravity Railroad and Canal was published in the September 6, 1848 issue of *The Somerset Whig*. Postulated in this description, in which there are some factual errors, is, nevertheless, the remarkable implied image of a constantly moving conveyor belt (“planes... so arranged as to keep up the operations constantly and without confusion.”) between Carbondale and New York City, a conveyor belt upon which are placed, every 6 to 8 minutes, 12 tons of anthracite coal (“in every 6 or 8 minutes, 12 tons of coal leave Carbondale for New York”).

Here is that description: “There are 7 or 8 planes operated by steam power, 4 full cars drawn up and 4 empty cars let down each time, and all so arranged as to keep up the operation constantly and without confusion. Horses are used to draw the cars from the head of one plane to the foot of the next, an average distance of 20 or 30 rods. The cars carry 3 tons each. They pass 4 over the plane each trip, which is done in about 6 minutes—therefore in every 6 or 8 minutes, 12 tons of coal leave Carbondale for New York. [emphasis added] The whole operation is very interesting and no one can fail to be highly gratified, interested and well paid, for a visit to Carbondale and Honesdale. / I am informed that at the present time, this Co. employs in all, (including boatmen on the canal) over 5000 men and boys, over 7000 horses, and 850 canal boats. In 1829, they forwarded 7000 tons of coal to New York—in 1847, they forwarded 388,283 tons, besides transporting a large amount of produce and merchandise. In 1848, they expect to reach 500,000 tons. . .”

Summary description of revisions for 1845 from N. H. Hiller

"In 1847, the use of steam had become more or less general and the company found that it would be better to equip its planes with steam engines and remove the faithful water wheels. They therefore let bids out to the Novelty Iron Works, the West Point Foundry, and to the Berdens Foundry Company for steam engines and boilers and their installation. In order to regulate better the flow of traffic over the system, the turnouts [in the 1829 roadbed] were abolished and double tracks were established everywhere on the planes. At this time, also, the 'T' rail was installed [T-rail not installed in 1847, but in 1858], the rails until then having been ordinary strap . . . The adoption of the 'T' rail gave much greater strength to the roadbed and heavier loads were inaugurated. The same gauge was retained." ("Up Hill and Down Dale by Gravity Rail" by N. N. Hiller, Jr. (*The Delaware and Hudson Company Bulletin*, June 15, 1931, p. 181-182, 188-189) **Note:** Hiller is not correct when he says that 'T' rail was installed in the system "at this time" [1847]. 'T' rails were not installed until 1858.

4504

Four Major Revisions for 1845 Configuration

1. New Planes and Levels from Carbondale to Honesdale, all double tracked
2. Levels for loaded cars graded West to East.
3. Planes Nos. 13-17 installed, for moving light cars from Honesdale to Waymart. (see sections 4515-4520, herein)
4. Extension to Archbald (line built in the summer of 1845) (see sections 4523-4529, herein)

4505

A Closer Look at the 1845 Revisions

Innovations recommended and effected under the direction of James Archbald:

1. New Planes and Levels from Carbondale to Honesdale, all double tracked

Planes 1-5

The new road was more than a half mile shorter than the original 1829 configuration.

Planes 1-5, to the top of Moosic Mountain, were all re-done: they were (1) double tracked and (2) equalized in length--to obtain greater capacity (at least a half million tons). Larger stationary engines (than in 1829) installed on all five of the new planes. (For the 1859 configuration, the D&H purchased sixteen 75 horsepower engines for use on all planes from the Dickson Manufacturing Company, Scranton.)

Summit Level, from head of Plane No. 5 to head of Plane No. 6: shortened by 3/4th mile from what it was in 1829.

“Upon arrival at the summit of the mountain, the road as originally constructed extended one and three-quarters miles with a very slight descent in favor of the loaded cars. Mr. Archbald’s reconstruction decreased this to three-quarters of a mile, and a more favorable descent was obtained.” *COP*, pp. 134-35

Planes 6-7, down to Waymart

“Descending from the summit, towards Honesdale, the first inclined plane, No. 6, originally three-quarters of a mile long, was not much changed in location but because of its great length it would have been impossible to move over it, as at first built, more than three hundred and fifty thousand tons yearly. Mr. Archbald remedied this defect by dividing the plane into two of equal length. From the foot of plane No. 6 to the head of No. 7 a short piece of the road was left unaltered, the only change at these points being some improvements in the machinery at the head of plane No 7.” *COP*, p. 135:

10-mile Level installed, Waymart to Honesdale

“From the foot of plane No. 7 to Honesdale, a distance of ten miles, very important additions and improvements were made. The road here, as originally built, was a single-track structure with turnouts, divided into two sections. The first, from plane No. 7 to plane No. 8, six miles in length, had a descending grade for the loaded cars of forty-four feet per mile, enough to enable the force of gravity to move the cars the entire distance; return cars being drawn back by horses, each horse drawing four cars. At No. 8 was another descending plane from the foot of which to Honesdale, a distance of four miles, there was a descending grade in favor of loads of twenty-six feet to the mile. On this section horses were required in both direction, each horse drawing five cars. It was impracticable, with this construction, to handle over these sections an annual traffic exceeding two hundred thousand tons. Materially to increase their capacity required double-tracking and Mr. Archbald undertook and executed this improvement. / Upon the same sections he made changes in motive power so ingenious as to demand examination. Commencing at the foot of No. 7 he utilized six miles, as originally constructed, extending to No. 8. From that point the track was relaid on the same grade, forty-four feet to the mile, all the way to Honesdale, thereby establishing a uniform descent over the entire ten miles on which the loaded cars would move by the force of gravity alone.” *COP*, p. 135-36

Planes and Levels (Carbondale to Honesdale) all double tracked:

Dr. Steers (p.162) remarks correctly: "The two track system installed by Archbald relieved the bottle neck resulting from single track levels [in the 1829 configuration]. . . The effectiveness of his changes are reflected by the five-fold increase in coal tonnage hauled by the new road. / Archbald discovered that a gradient of 6" in 60' (0.833%) on the loaded track and 6" in 54' (0.926%) on the light track would provide sufficient 'power' to move the cars on the respective levels."

2. Levels for loaded cars graded West to East.

Levels graded so that the loaded cars moved from the head of one plane to the foot of the next by gravity (generally West to East), which meant that the loaded cars did not have to be pulled across the loaded levels by horses, a technological innovation that resulted in a big savings in dollars.

We read the following in Clark:

"While Mr. Archbald was in charge of the Delaware & Hudson Railroad at Carbondale he conceived the plan of raising the road at the head of each plane, and lowering at the foot of the next, and in this way making a slight decline from the head of one plane to the foot of the next. As the road was before that constructed it was perfectly level between the planes and the cars were drawn back and forward from one to the other by horses. Mr. Archbald's plan was to make avail of the force of gravity by a slight inclination, so that the cars would run of themselves after being drawn up the planes by the stationary engines. He laid his proposition before the managers of the company, and with difficulty succeeded in getting permission to try it between planes Nos. 4 and 5. But so successful was this change when tried, that it was not only at once adopted along the whole line, but it was decided by Mr. Wurts, the President, not to mention the matter in his annual report, that the company might have full enjoyment and monopoly of the invention. This simple plan has been in use by the company ever since, and in 1847, when Mr. Archbald took charge of the construction of the Pennsylvania Coal Company's road, he laid it out in the same way. . . " (J. A. Clark, *The Wyoming Valley, Upper Waters of the Susquehanna, and the Lackawanna Coal-Region, including Views of the Natural Scenery of Northern Pennsylvania, from the Indian Occupancy to the Year 1875*. Photographically Illustrated, 161; Chapter XXX, pp. 158-161, of the Clark book is titled JAMES ARCHBALD.)

The light cars, however, were still pulled back up the light levels (generally East to West) by horses, as they were in the 1829 configuration. Given the fact that the loaded level and the light level on each of the planes were contiguous (side by side) it would have been virtually impossible, especially on the top of the Moosic Mountain, to establish successfully the two tracks on the same roadbed/alignment, that is to say, with the loaded level descending in the Honesdale direction and the light level descending in the direction of Carbondale. The stability/soundness of each level would have been constantly weakened/eroded/compromised by the other. When the 1859 roadbed was put in place, for the first time, the D&H explored the notion of separating/distancing the levels on the planes, the one from the other. They did so on Planes 7 and 8, as we will see in the volume on the 1859 configuration.

On the question of moving coal cars, full and empty, by using gravity as a source of power [on the loaded track only] through a double-tracked system, Dr. Steers says (p. 162): “Archbald began to use gravity as a source of power with the construction and operation of the railroad between 1836 and 1847. At this time he developed the gravity system on the ‘levels’ between the planes [on the loaded track only*]. Two tracks were required, a ‘loaded’ track for cars carrying coal from the mines to . . . Honesdale for . . . shipment via the canal. The second track, the ‘light’ track was used for returning the empty cars to the mines. The two track system installed by Archbald relieved the bottle neck resulting from single track levels [in the 1829 configuration]. . The effectiveness of his changes are reflected by the five-fold increase in coal tonnage hauled by the new road. / Archbald discovered that a gradient of 6” in 60’ (0.833%) on the loaded track and 6” in 54’ (0.926%) on the light track would provide sufficient ‘power’ to move the cars on the respective levels.”

*A gravity system for moving light cars on the levels on Planes 7 and 8 was instituted in the 1859 revisions, as we will see in the volume on that configuration. As such, as early as 1856, the use of horses on the levels on the Gravity Railroad was discontinued (except at the foot of Planes 1 and 13, where the horses were still used like switcher engines).

In the August 14, 1856 issue of the *Carbondale Transcript and Lackawanna Journal* (p. 2) we read:

“The Delaware and Hudson Canal Company have located their new Railroad [the 1859 configuration], and are engaged in clearing the track, preparatory to grading. To reach the summit of the mountain they design to have eight engines, where they now have but five, and dispense altogether with the use of horses on the track. This will enable them to transport an increased amount of coal over the road, which we learn, they are preparing to do. Success, say we, to every enterprise calculated to add to the business of this part of the valley.” (*Carbondale Transcript and Lackawanna Journal*, August 14, 1856, p. 2)

3. Planes Nos. 13-17 installed, for moving light cars from Honesdale to Waymart. (see sections 4515-4520, herein)

“For returning the empty cars, from Honesdale to No. 7, he constructed a new track upon a different location, and on this employed stationary engines to draw up the cars to elevations from which they would move by gravity to the point at which they could be moved by the next engine in the series. On account of the rugged country, five of these stationary engines were installed to operate the ten miles of new track. At first, four of these engines were driven by steam and one by water. By 1847, however, two of them were operated by water power, which was found to be cheaper. [emphasis added] During 1847, Mr. Archbald intended to change one of the remaining three to water power, and he planned to change another to water power early in 1848.”[so, by 1848, four were water powered, which is confirmed by the 1895 map] *COP*, p. 135-36.

Once the empty cars were returned to the foot of Plane No. 7, they were worked back through the system to Carbondale through the seven inclined planes on the Moosic Mountain, which were now all double tracked

4. Extension to Archbald (line built in the summer of 1845) (see sections 4523-4529, herein)

One South Plane (the old Blakely Plane and Level) and two North planes with levels installed

4506

Carbondale to Honesdale and Return; Carbondale to Archbald and Return

So extensive were the revisions, additions, and expansions to the 1829 configuration of the Gravity Railroad that it is not an exaggeration to say that a new Gravity Railroad was built in the late 1840s under the direction of James Archbald. We will now have a look at the railroad that was constructed at that time.

4507

Plane No. 1

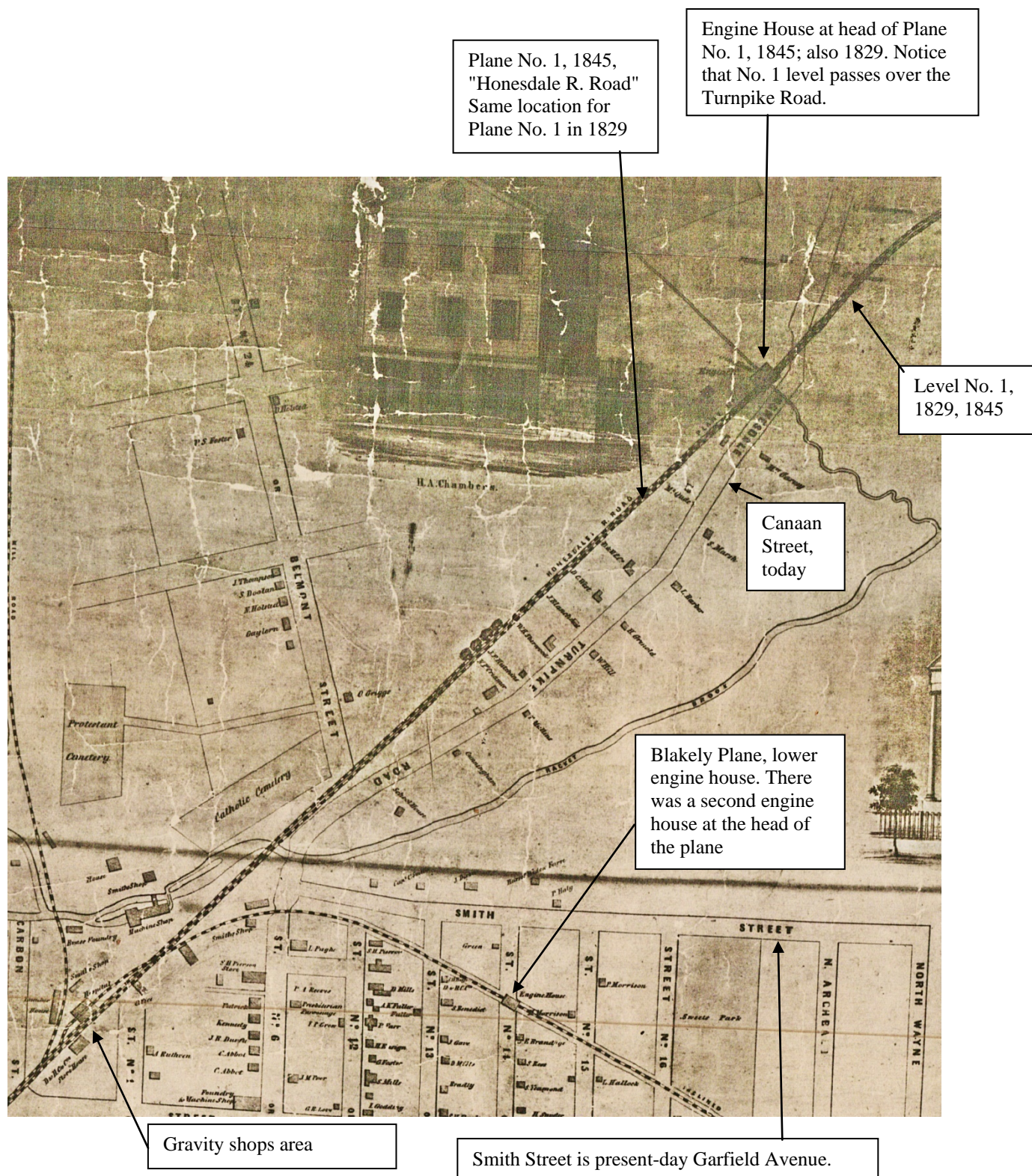
As in 1829, Plane No. 1 went up Sage Court, which is sometimes referred to as "the alley" on old maps. It's the street to the left of Canaan Street, on the way up the hill.

The plane was now, however, double tracked, and the stationary steam engine at the head of the plane was larger than the one that was in use in the 1829 configuration.

***Mathews* says the following about Plane No. 1:**

"The foot of plane No. 1 was where passengers by the gravity road take the cars in Carbondale [in 1882], and was at an elevation of 87 feet above the canal in Honesdale, and 1057 above the tide level. / In ascending plane No. 1, a distance of 2000 feet, the grade was about 1 foot in 12, overcoming an elevation of 170 feet. This plane was located parallel to, and along the northwestern side of, the turnpike to Honesdale. / From the head of plane No. 1 the track was nearly level for 600 feet to the foot of the next plane." (*Mathews*, p. 235)

All of Plane No. 1 in the 1845 configuration is shown on the detail given below from the 1851 *Map of the Village of Carbondale*, where it is marked "Honesdale R. Road Plane No. 1." Note that the head of the plane is on the north side of the Honesdale Turnpike Road and that the beginning of the level between the head of Plane No. 1 and the foot of Plane No. 2 crosses the Honesdale Turnpike Road.



“At the foot of old No. 1 plane, records show that a fifty foot undershot water wheel was used for the first eighteen years of the road’s operation.” N. H. Hiller three-part article.

Hiller is mistaken. There was never a water wheel at the foot of Plane No. 1 to operate the plane. There was a waterwheel at the Lackawanna River on the mine plane (see p. 44).

There was a waterwheel at the head of Plane No. 1 in the period 1845-1857/58. Water from that D&H Reservoir fueled the waterwheel (which was used in the Spring and Fall) that was at the head of Plane No. 1. For more on this waterwheel, see pp. 46.

Both the water wheel and the plane from the “New Mines” to the foot of No. 1, as well as all of Plane No. 1 (Old No. 1 Plane) in the 1845 configuration can be seen in the view of downtown Carbondale that is given below. This map detail is from the map on page 12 in *D&H Deeds Luzerne I*. The map illustrates a deed, pp. 1-6, dated July 28, 1825, between John Wurtz & others, Trustees, and The Delaware & Hudson Canal Company. Here is that detail:

Water for the engine at the head of the plane came from the D&H Reservoir on the hill above Carbondale. The water to fill that reservoir came from Reservoir No. 4, via a raceway that was a spur off the Racket Brook. Notice on the map that there is a waterway from the engine house on Plane No. 1 back to the Racket Brook.

Engine House at head of Plane No. 1, 1829, 1845

Plane No. 1, 1859-1899

Foot of Plane No. 1, 1829-1899

Lincoln Avenue today

Salem Avenue today

Level from waterwheel to foot of Plane No. 1

Present day Memorial Park and City Hall

Waterwheel at the head of the plane from the mines



Here is a closer look at Plane No. 1. Note that in the detail below that “Old No. 1 Plane” went up the hill to the left of what is now called Canaan Street. Note also the engine house at the head of the plane, which was provided with water from the D&H reservoir that was located in the area where the former Carbondale city dump was at one time located. The excess water for the engine at the head of No. 1 flowed down the embankment to rejoin the Racket Brook (which provided the water for the reservoir in question).



Excess water flowed down the embankment and back into the Racket Brook, where it came from in the first place.

No. 1 had a water wheel initially in 1845 and it was there until 1857/58:

Plane No. 1 had a big upright stationary steam engine, 1829-1845. It was replaced in 1845 by a pair of horizontal stationary steam engines. Also in 1845, a 50 foot (maybe 70 foot) waterwheel was installed. The water wheel was there until 1857-58, when the new plane No. 1 was finished.

From "Recollections of the Water Wheel at the Head of Plane No. 1 in 1845 Configuration"—see below, pp. 48-49:

"It was a mammoth wheel that made a great noise when it revolved and as its operation was not steady, it was soon abandoned. It was to run this wheel that the reservoir [see D. G. Beers 1873 map detail, below] on what was known as No. 1 hill was erected." [This reservoir started out as the Durfee Saw Mill Pond.] This wheel was used in spring and fall, when water was abundant. The wheel was not used very long. [taken out when plane No. 1 was finished 1857-58]. It soon dried out and fell to pieces. C. M. Alexander had an oak book case that was made out of this wheel. He bought the case in about 1866 from Charles Wurts for \$25. Water was supplied to this wheel from the Durfee saw mill pond [where the former Carbondale city dump was located; in the third installment of her 1946 history of Carbondale, Alice Rashleigh says: "On July 18, 1850, heavy rain caused the Durfee Dam, a mile above the village of Racket Brook, to give way. The torrent swept everything before it, through Church and Main Streets. The Lackawanna rushed over its banks and flowed into the mines."]. (The Durfee farm was near No. 4; the Durfee saw mill was on the Racket Brook, two miles above town.) James Archbald remembered this water wheel on No. 1."

Accident on water wheel plane (Plane No. 1) in 1857:

"A young man named Griffin had his legs shockingly crushed by the balance-car on 'Water-wheel Plane,' Monday morning last. He died a few hours after the accident." (*The Advance*, June 25, 1857, p. 2)

The water wheel at Plane No. 1 was run by Eulis Campbell.

In the report by R. H. Willoughby, Editor, in the *Carbondale Advance* of May 28, 1857 (p. 2) on the address of the newly-elected Mayor of Carbondale, J. M. Poor, Esq., to the Select and Common Councils of the City, we read the following: "As regards the obtainment of a never-failing supply of water [for the proposed hydrants at the corners of the principal streets in Carbondale], a better mode would be, we think, the laying of pipes from the Reservoir [on No. 1 hill], down the plane [No. 1] and through our principal streets, having hydrants at the corners. There would be no fear of the water in these freezing in winter and the hose could be attached instantaneously. We understand that No. 1 water wheel is to be dispensed with as soon as the new plane is finished; [emphasis added] so that there is nothing to hinder such an accomplishment but the expense, which would be small compared with the necessity of some such work." (*Carbondale Advance*, May 28, 1857, p. 2)

Water Pipes to Machine Shops:

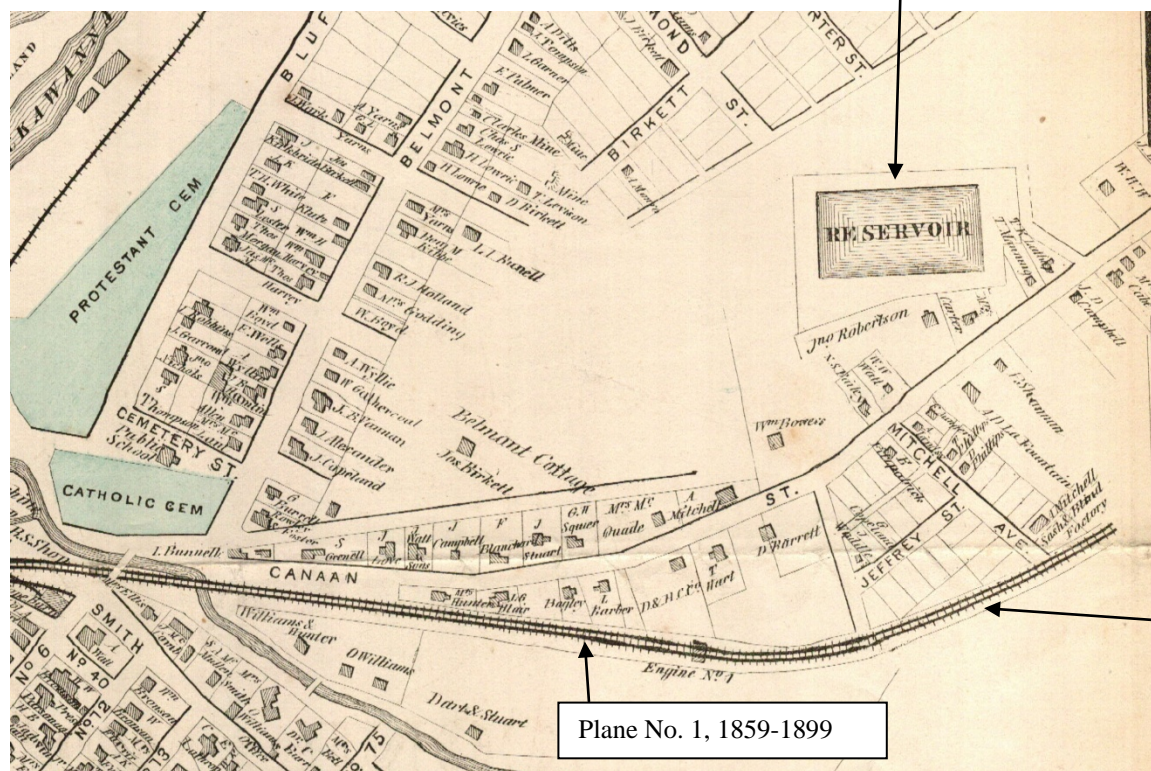
In 1849, the D&H made a second use of water from its reservoir at the head of Plane No. 1: the D&H installed a line of cast iron water pipe from the reservoir down Plane No. 1 to their machine shops.

"*Not Fairmount!*--The Del. and Hud. Canal Company have extended a line of cast iron water pipes from their reservoir at No 1., to the foot of the Plane, in the vicinity of their Machine Shops. From the elevation of the reservoir much force is obtained and water easily thrown and with much power to a considerable height. The failure to obtain a Borough Charter has prevented arrangements being made to distribute water from this, or any other source, through the Village. / Similar accommodations for the benefit of the public are much needed." (*The Lackawanna Citizen and Carbondale Democrat*, Friday, August 24, 1849, p. 2)

1859: **"The Water! The Water!"** / The time for action has come. The water has been introduced into the pipes laid by the Company, and those also of J. Benjamin & Co., and works well. A fine, copious, and powerful stream is now at command at any moment from any of their numerous hydrants. / All that is necessary now to extend its benefits along our two principal streets is to systematize the interest felt, and reduce it to some feasible plan." (*Carbondale Advance*, July 30, 1859)

1873 D. G. Beers/Luzerne County map detail showing reservoir (Durfee Saw Mill pond) on No. 1 hill. By 1873, there was no longer a water-connection to the head of Plane No. 1.

The D&H Reservoir on No. 1 Hill. This body of water was originally the Durfee Saw Mill pond. Water for this reservoir came, via a raceway from the Racket Brook, which flows out of No. 4 Pond.



Recollections of the Water Wheel at the Head of Plane No. 1 in 1845 Configuration

In 1902, a waterwheel was found at the coal pocket site at the base of Salem Avenue. There were articles and notices published in the papers asking what people knew about water wheels in Carbondale. Several people remembered the water wheel on No. 1 Plane.

“A lady whose recollection runs well back into the forties said today that it might be the wheel put up by the Delaware & Hudson in the early days of the Gravity road to draw the cars up No. 1 Plane. It was a mammoth wheel that made a great noise when it revolved and as its operation was not steady it was soon abandoned. It was to run this wheel that the reservoir on what was known as No. 1 hill was erected.” (February 1, 1902) SRP: The wheel that was dug up at the base of Salem Avenue was not the wheel from the head of No. 1 Plane. The D&H would not have moved the wheel down the hill and then buried it. The wheel that was dug up at the foot of Salem Avenue was one of the wheels from Plane 28. This lady was wrong about the identity of the wheel found. Her comments, nevertheless, are very useful, in that she reports that she remembers the mammoth wheel at the head of No. 1 Plane—which tells us for certain that there was water power at the head of Plane No. 1 in the 1845 configuration.

On that same date, C. E. Lathrop commented: “The cars were never drawn up No. 1 plane by water power according to my recollection; and that goes back to a very early period. Whitman Brown was the engineer at the head of that plane as early as 1833.” SRP: C. E. Lathrop’s “recollection” is not accurate. Two other commentators, T. B. Vannan and James Archbald, agree with the lady cited above that there was a water wheel at the head of Plane No. 1.

T. B. Vannan (Wednesday, February 5, 1902): “I see by the One-Minute Interviews that no water wheel was used to draw cars on the Gravity. My recollection is that one was used to draw cars up No. 1 plane about the year 1850. It did not give good satisfaction and was in use for but a short time. One of the principal reasons the reservoir was constructed was to furnish water for this wheel, which, if I remember rightly, was nearly seventy feet in diameter.”

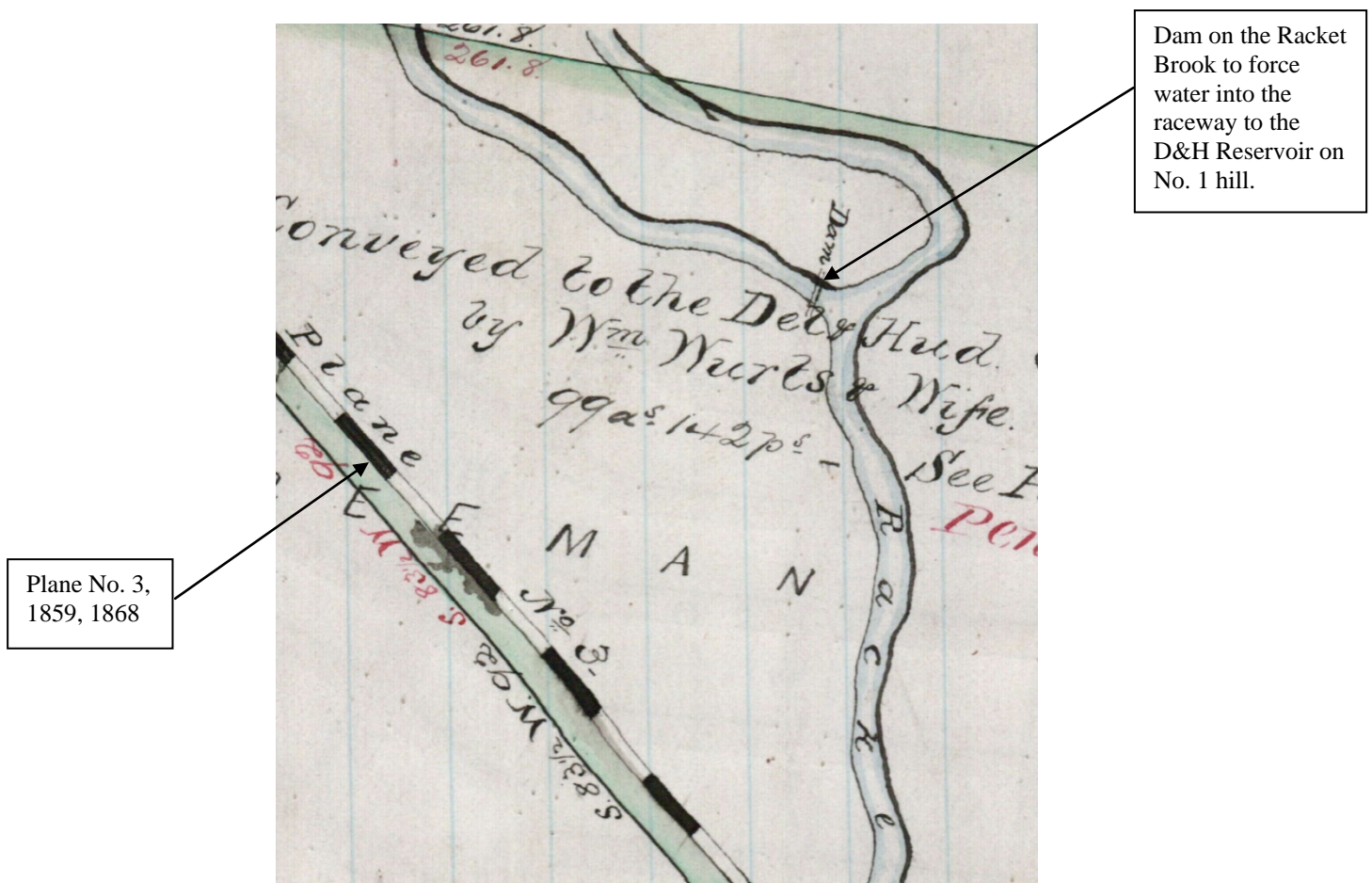
James Archbald, Scranton (Wednesday, February 5, 1902): “I remember the old water wheel that used to be at No. 1 plane and was inquiring about it when in Carbondale in September.”

J. M. Alexander recalled, Thursday, February 13, 1902, specifically what became of the old water wheel from the head of Plane No. 1: “ ‘Say, reporter, did you ever hear what became of that old No. 1 water wheel that you’ve been telling us so much about?’ ” asked J. M. Alexander of a LEADER man. The newsgatherer professed ignorance and inquired what Mr. Alexander knew of the wheel. ‘Well,’ he said, ‘I have a book case the material of which was a part of that wheel. It is made of good heavy oak and I think a great deal of it now. When Charles Wurts was going to leave town, I thought perhaps he might now want to take the case along, it was so heavy. That was about 1866. I had quite a number of books on hand and I asked Gus Wurts to go to his uncle and see if he couldn’t get the bookcase. He succeeded in doing so for \$25, which I gladly gave, and the bookcase has been in my possession since.’ ”

The water for the stationary steam engine at the head of Plane No. 1 was provided by the “Reservoir D&H C Company” that was located at the top of the hill to the north of the engine house. That reservoir is shown on the map detail, from the map on page 10 in the D&H book, given below. Also shown on the detail given below is the level between the head of Plane No. 1 and the foot of Plane No. 2. Level No. 1 is the bottom portion of the plane; the inclined plane itself, Plane No. 2, is the more or less vertical portion of the plane, which is marked on the map as “Plane No. 2.” In *Mathews*, p. 235, we read: “From the head of Plane No. 1 the track was nearly level for 600 feet to the foot of the next plane [Plane No. 2].”

The water for this reservoir came from a raceway that was established as a branch of the Racket Brook. To move water into the raceway, the D&H built a dam across the Racket Brook in its flow down the mountain from No. 4 Pond (where the Racket Brook originates). Significantly, the Racket Brook was made to flow, by means of a small dam (shown on the map below), not in the bottom of the ravine where it now flows (and where it would naturally flow), but up along the north side of the ravine where it was put to work by and for the D&H. First we will look at a close-up of the area (map in D&H book on p. 11), and then we will look at the larger view: Plane No. 3 in the detail shown below is in the 1859, 1868 configurations of the roadbed, which we will examine later in this study.

Close-up: Dam on Racket Brook in upper right corner:



Portion of
level
between
Head of
Plane No. 2
and foot of
Plane No. 3

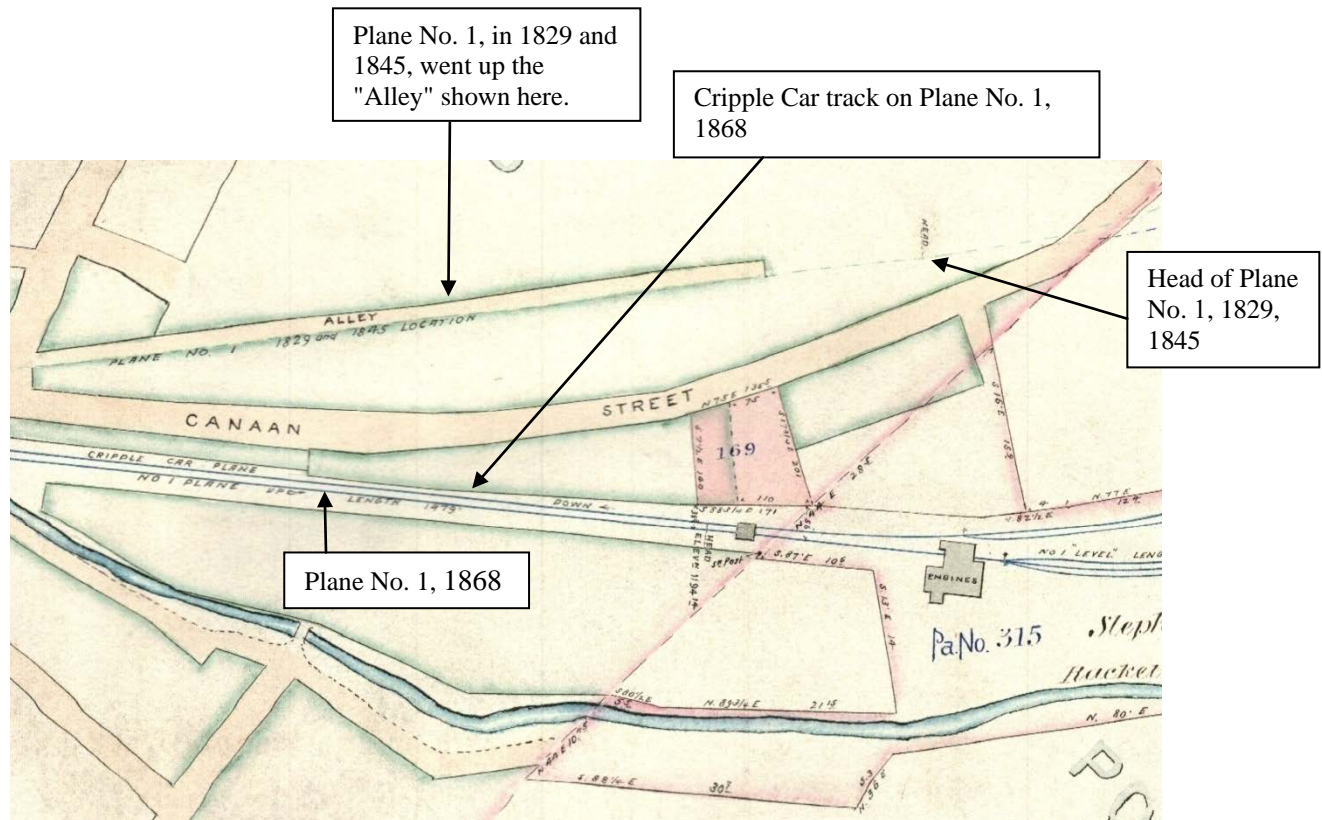
Foot of Plane
No.3, 1859, 1868

Head of
Plane No.
3, 1859,
1868

Dam on Racket Brook to force water to D&H Reservoir on No. 1 hill

Level No. 3,
on trestle
across ravine
at the
Artesian Well
site.

Here is another view of “Old Plane No. 1,” which went up the “alley” on the north side of present-day Canaan Street to the top of the hill in both the 1829 and 1845 configurations. In this view we also see Plane No. 1 in the 1859 and 1868 configurations. The view is from the 1895 Gravity Railroad map volume in the collection of the Lackawanna Historical Society:



Accidents, Facts about the Plane, Daily Life

McIntyre from Honesdale killed on Plane No 1 in December 1850:

"Railroad Accident. / A melancholy accident occurred here upon No. 1 Plane of the railroad on Monday. An Irishman from Honesdale, by the name of _____ McIntyre, was passing down the plane on the empty train of Cars, and jumping up on the other track, just before the loaded train, it passed over him, entirely crushing one limb beside other injuries. The limb was immediately amputated, but the wounds were so severe as to prove mortal. He died on Tuesday, in about 24 hours from the time of the accident. It is supposed that he anticipated a collision of the Cars in the two trains as he saw the loaded train approach, and was endeavoring to avoid what he supposed to be a danger from that source, though the danger did not really exist." (*The Lackawanna Citizen*, Friday, December 20, 1850, p. 2)

McCabe boy in serious accident on Plane No. 1:

“A lad named McCabe, about twelve years of age, met with a severe accident last Monday, by the cars at the head of No. 1 running over his legs—lacerating and fracturing them in a frightful manner. He was going to school,—and his mother cautioned him against going on the cars; so the accident is the result of disobedience of the commands of a mother, and reckless carelessness on the part of the boy. This is a deep affliction for widow McCabe, as about a year since her husband was killed, and now this accident to her oldest boy fills her cup with bitterness and woe.” (*Carbondale Transcript, and Lackawanna Journal*, July 11, 1856, p.2)

Many members of the Campbell family, over the years, killed working on the railroad:

"Fatal Railroad Accident. / A Remarkable Series of Railroad Calamities in One Family-- The Fifth Victim Buried Here on Tuesday Last. / The early settlers of our town well remember the family of Mr. Andrew Campbell, many years ago residing in a house then standing on the West side of the Lackawanna near the present location of Gelder's Foundry. Mr. Campbell, the father, raised a family of six sons, and we believe three daughters. He came to Carbondale from the North of Ireland when the town was new, and he and his family were attendants upon the Episcopal Church. / The father received injuries upon the Del. & Hud. RR. at the head of No. 1 Plane, of which he died June 16th, 1851. This sad calamity has since been followed by the similar death of four of the sons. / Leonard, was killed upon the Del. & H. RR., near the Pump House in the Fourth Ward, January 13th, 1862, aged 23 years. / Wright, was killed on the Bloomsburg RR. at Pittston, January 14th, 1869, aged 32 years. / Agur, was killed on the Morris & Essex RR., in New Jersey, June 2nd, 1871, aged 34 years. / Harman, the fourth son and fifth victim to railroad casualties in this unfortunate family, fell through the trap doors of a coal car on the Lehigh Valley RR., at Pittston, on Friday of last week, and was so seriously injured that he died on Sunday morning, April 23rd, inst., aged 37 years. / Two brothers, Ulysses and Loftus, we believe still survive and are in business in the valley below us. / Remarkable as are so many RR. accidents in one family, it is worthy of note that in addition to these, three cousins and two nephews of these young men have met with a similar death." (*Carbondale Advance*, April 29, 1876, p. 3)

More on the death of Leonard Campbell (brother of Harman) in 1862:

“Another Fatal Accident. . . / Leonard Campbell while in the discharge of his duty, upon the Railroad, fell from a Passenger Car, two wheels of which fractured his head in such a manner that he died within an hour, having lain insensible from the time of the accident. / On Wednesday his remains were taken to Trinity Church, which was crowded by sympathizing friends of his mother, brother and sisters. Impressive remarks were made by the Rector, which were attentively listened to. / It was an afflicting sight, to see this hitherto happy and united family, taking the ‘last fond look’ at Leonard; particularly so of his twin brother who was inconsolable at his sudden death.” (*Carbondale Advance*, January 18, 1862, p. 2)

Plane No. 2

The level from the head of Plane No. 1 to the foot of Plane No. 2 was 600 feet long, in accordance with the James Archbald modifications to all the levels, was graded significantly in favor of the forward flow, in this case, the loaded cars, which means that the cars moved by gravity on the loaded level, without horses pulling them to the foot of Plane No. 2.

Plane No. 2 and the engine house at the head of the plane are now in the same location as in 1829. The plane was now double tracked and a larger engine was in place in the engine house.

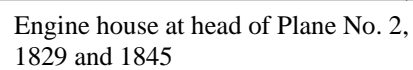
“Plane No. 2 was 2600 feet long, ascending 130 feet (or 1 foot in 20). This also was parallel to and along the western side of the turnpike.” (*Mathews*, p. 235)

Engineers at the head of Plane No. 2:

"At No. 2, the engineers were in the following order: Thomas Pillow, James Johnson, brother of Mrs. Davis on River street, Patrick Archbald, Perry R. Farrer and James Campbell, who had been in service there from 1858 to 1897, when he resigned and John Bate was appointed in his place." (*Joslin/Davies*)

In 1845, the location of the level between the head of Plane No. 2 and the foot of Plane No. 3 was in an entirely new location than in the 1829 configuration.

The engine house at the head of Plane No. 2, both in 1829 and in 1845, was right at the western side of the Turnpike to Honesdale. This engine house is shown on the map in *D&H Deeds Luzerne I*, p. 10, deed dated July 28, 1825, given on pages 1-6, between John Wurtz & others, Trustees, and The Delaware & Hudson Canal Company. The level between the head of Plane No. 2 and the foot of Plane No. 3, both in 1829 and in 1845, stayed on the western side of the turnpike road for almost the entire distance of the level. Both in 1829 and 1845, however, it crossed the turnpike to the eastern side on its descent to the foot of Plane No. 3 at White's Crossing. Here are two details from that map:



[illegible]

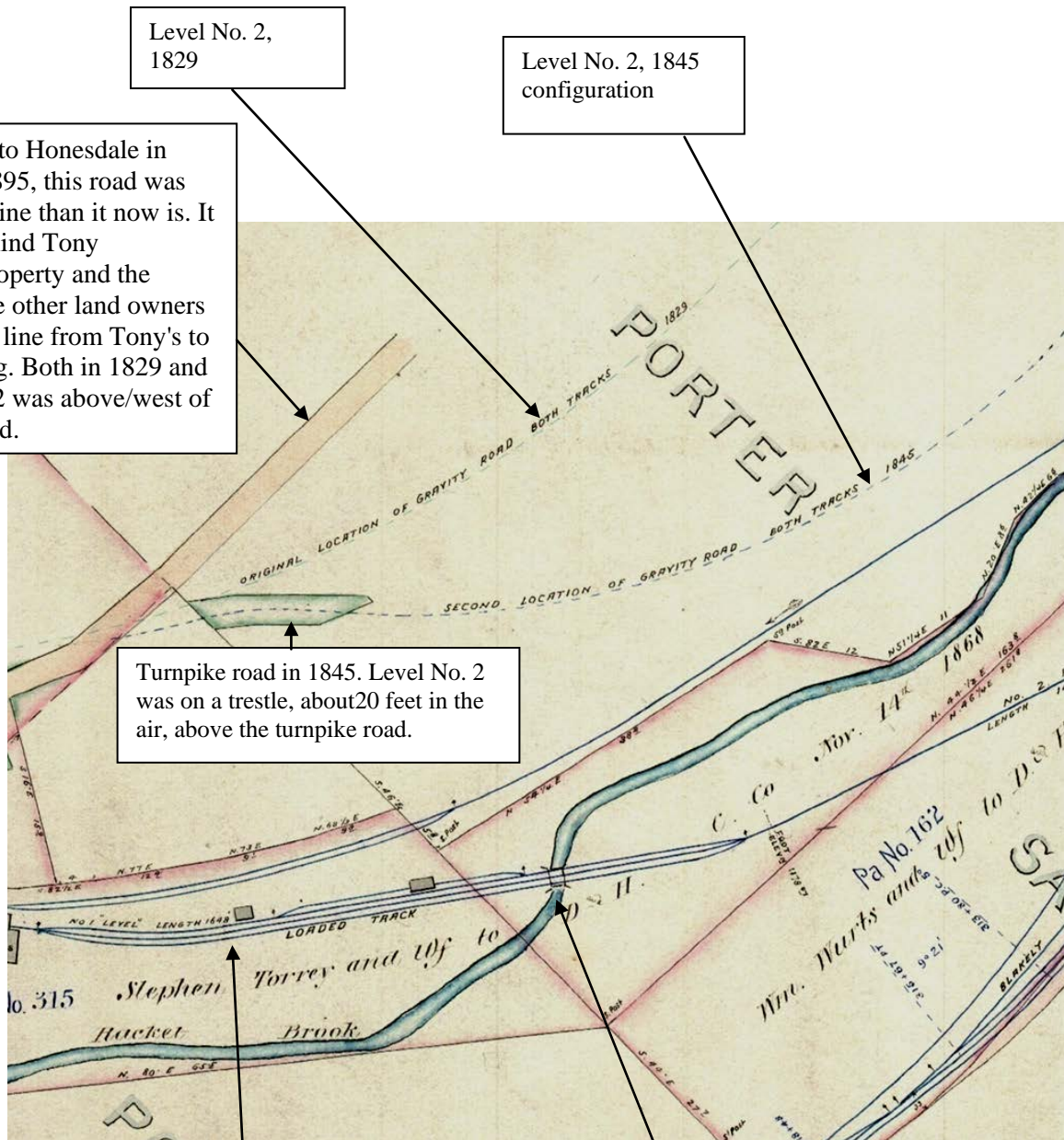
“From the head of No. 2 [in the 1829 configuration], the track [Level No. 2] was nearly level 2600 feet [over 800 yards]. This level part of the track crossed the turnpike, reaching the foot of plane No. 3, on the southeast side of the turnpike, at the foot of the hill called ‘No. 3 Hill,’ about 1 ½ miles from the foot of No. 1.” (*Mathews*, p. 235)

The Level between the Head of No. 2 and the Foot of No. 3:

58

In 1845, Level No. 2 (over 800 yards long, between the head of 2 and the foot of 3) followed a different path than this level in 1829.

The location of Level No. 2 both in 1829 and 1845 are shown on the detail from the 1895 Gravity Railroad map volume given below.



Level No. 2,
1829

Level No. 2, 1845
configuration

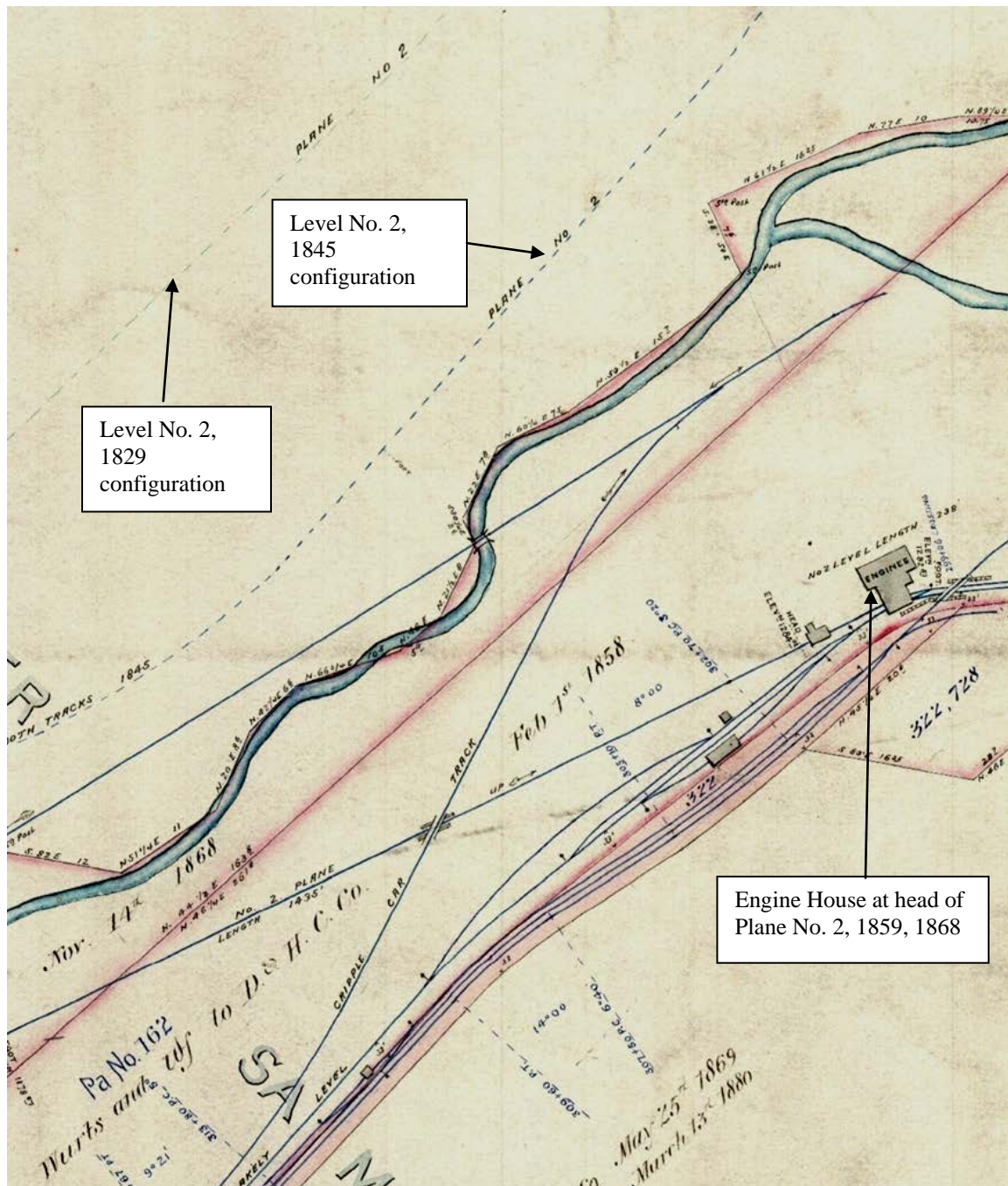
Turnpike Road to Honesdale in 1895. Before 1895, this road was lower in the ravine than it now is. It was located behind Tony Mickloiche's property and the properties of the other land owners in a descending line from Tony's to Whites Crossing. Both in 1829 and in 1845, Level 2 was above/west of the turnpike road.

Turnpike road in 1845. Level No. 2 was on a trestle, about 20 feet in the air, above the turnpike road.

No. 1 Level, 1859, 1868 configurations.
Note the multiple tracks on the level

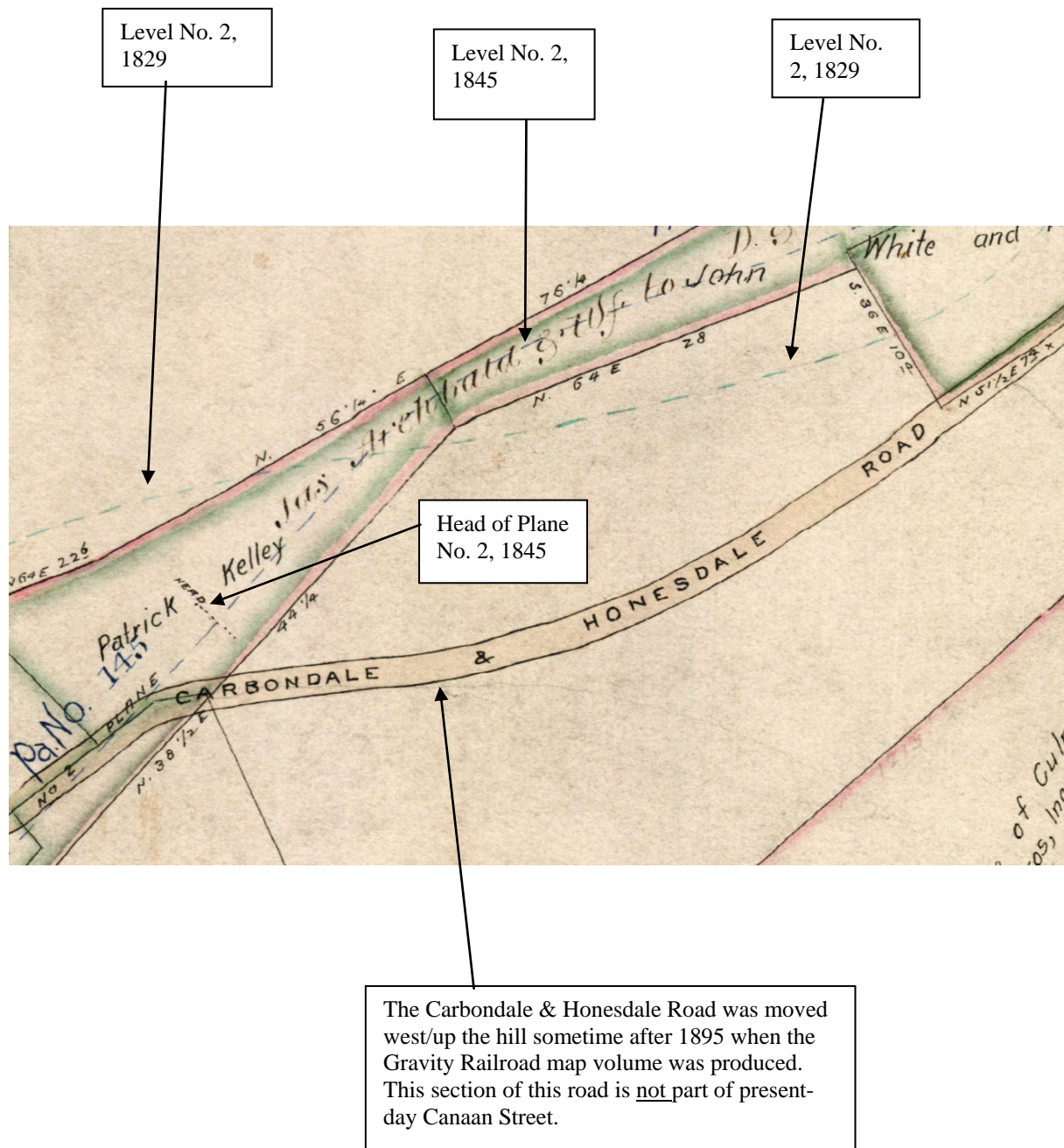
Bridge on Level No. 1 over the
Racket Brook, 1859, 1868

A second look at this area:



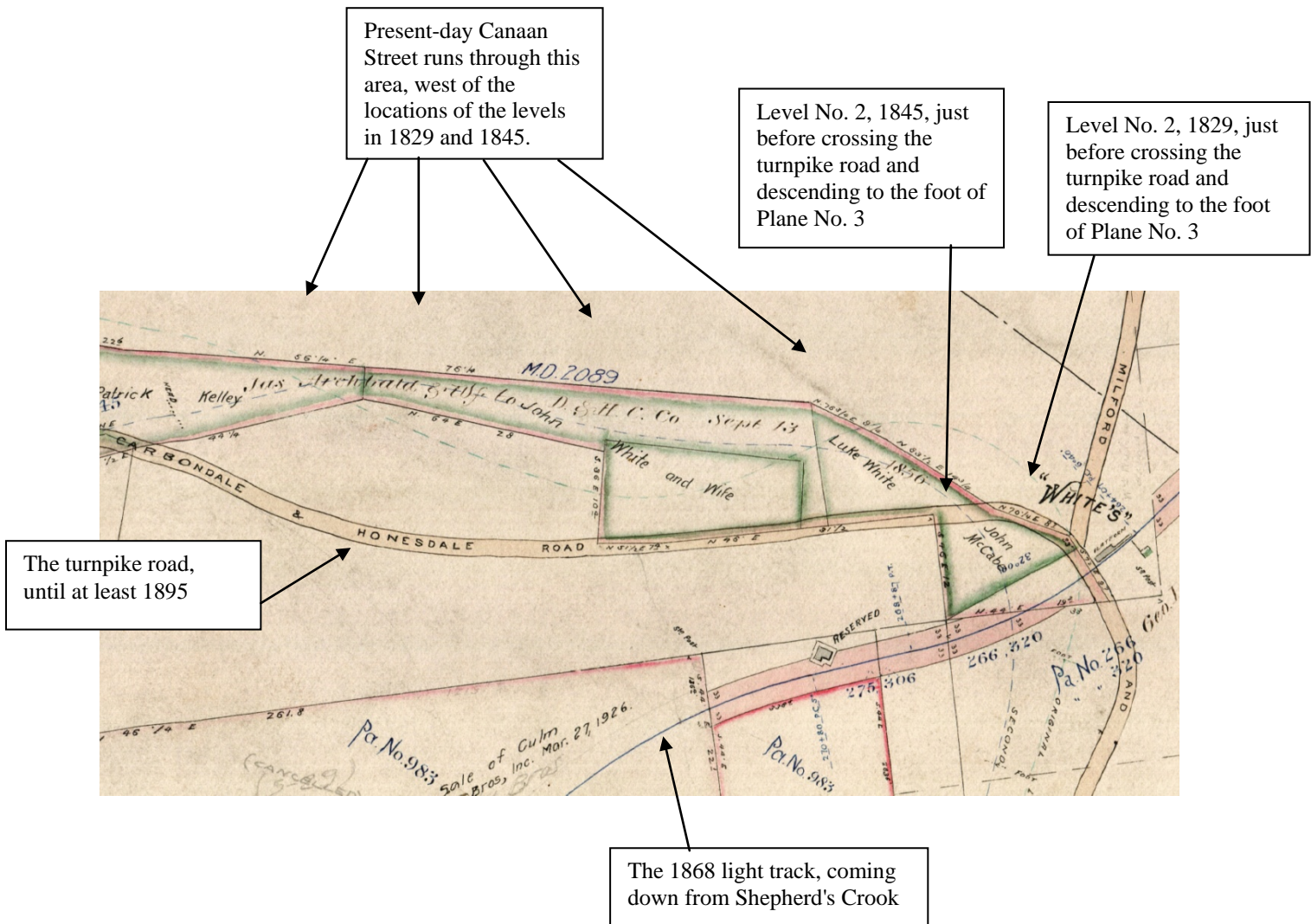
Level No. 2 (1829, 1845), as shown in the 1895 Gravity Railroad map volume:

Detail No. 1:

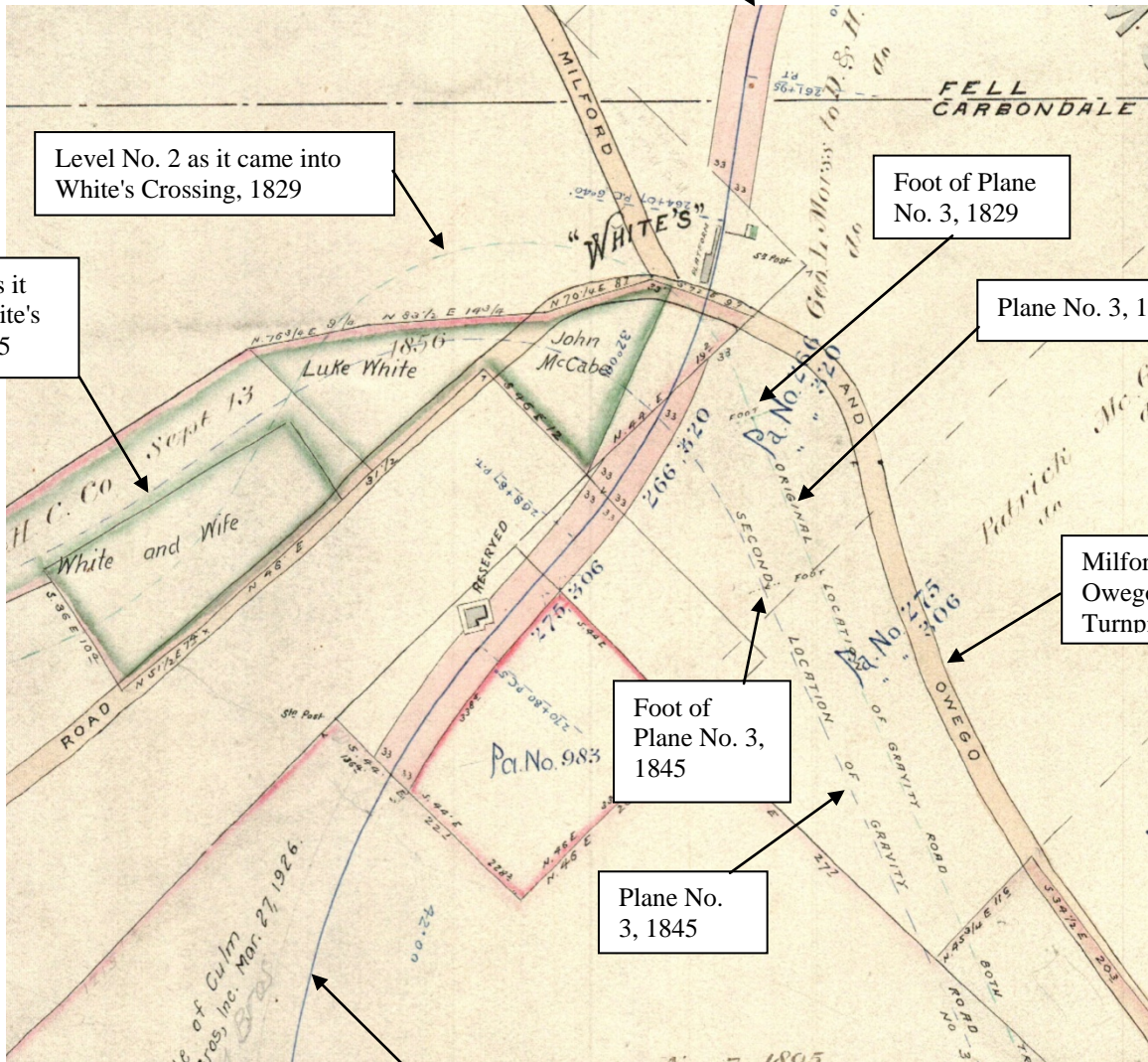


Level No.2, 1829, 1845, Gravity Railroad map volume:

Detail No. 2:

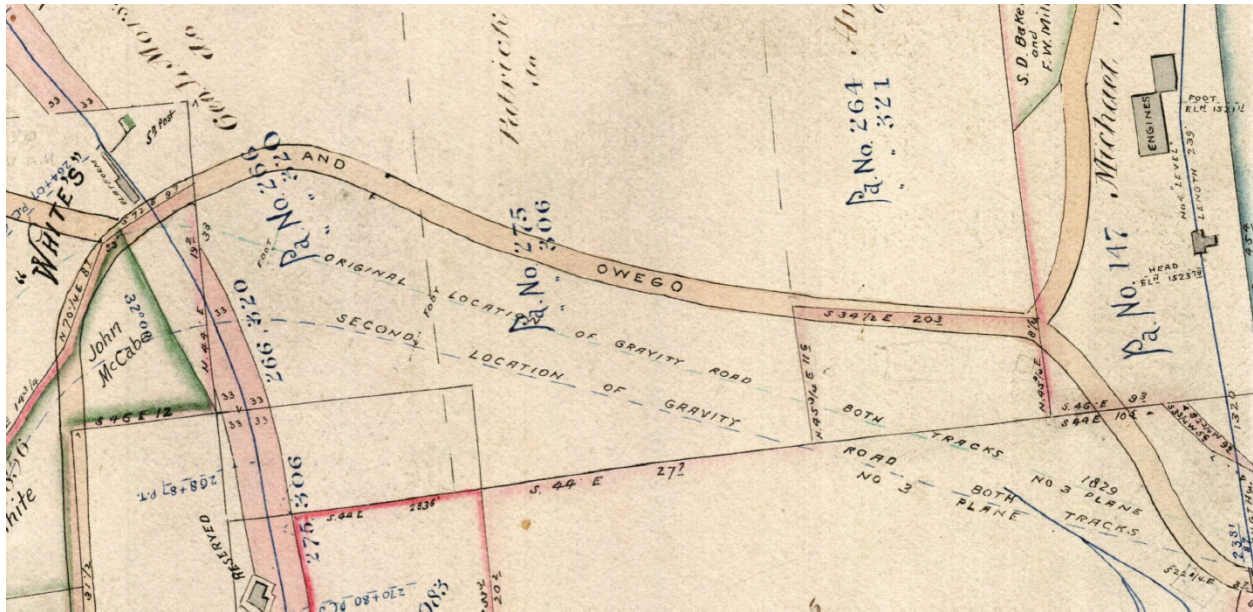


The light track coming down from
Shepherd's Crook, 1868



The turnpike road out of Carbondale for Honesdale went up the mountain at No. 3 by means of the Milford and Owego Turnpike. Present-day Route 6 ascends the mountain, it appears, on the roadbed for Plane No. 3 in 1845.

Gravity Railroad map volume:



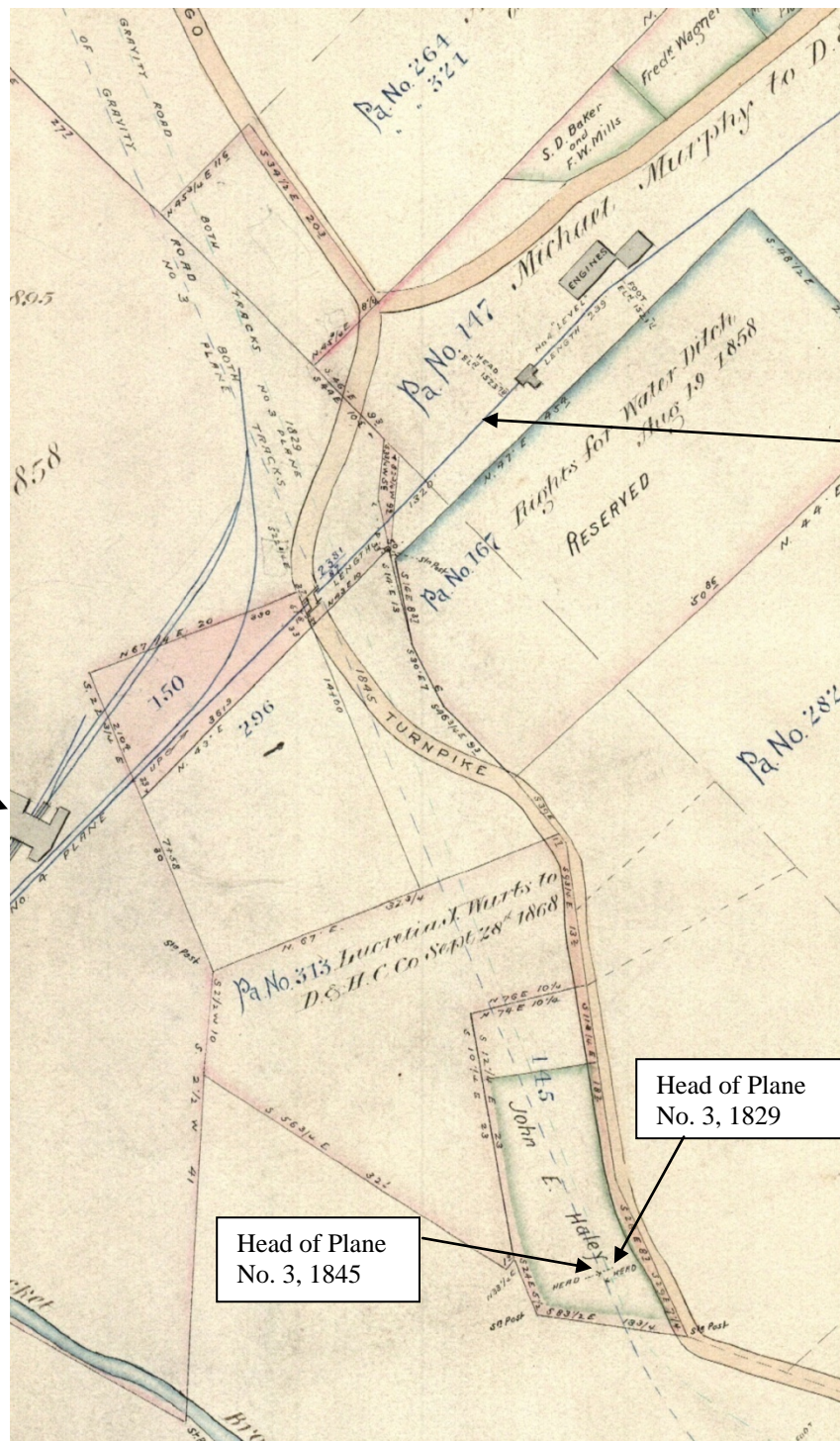
The level between the head of Plane No. 2 and the foot of Plane No. 3 ended, as we can see on the above map, on the southeast east side of the turnpike road, at the foot of what was known as "No. 3 hill." The foot of Plane No. 3, on the above map, is marked "Foot," just below the word "Second" in "Second Location of Gravity Road." Note that the 1929 configuration of Plane No.3 lies between the "Second Location of Gravity Road" (the 1845 configuration) and the Milford and Owego Turnpike.

Engineers at the head of Plane No. 3:

"No. 3 was manned first by Benjamin Franklin, followed in order by Edward Davis, John C. Davis, E. Y. Davis, Antoine Delafontaine. E. Y. Davis was transferred to No. 28. P. J. Foster succeeded Delafontaine, transferred from No. 7. E. Y. Davis said there were two engineers of the name of John C. Davis, and for that reason his father omitted the C. in his name, yet in the records one not knowing where they were stationed can not tell which one was meant in speaking of them." (*Joslin/Davies*)

Both in 1829 and in 1845, Plane No. 3 went up the hill wholly to the south of the Milford and Owego Turnpike for the first portion of its journey. (Route 6 in this section is probably on the site of the 1845 Plane No. 3.). The 1829 plane, as we have said, was between the 1845 plane and the Milford and Owego Turnpike. About half way up the plane (both in 1829 and in 1845), the plane went onto the Milford and Owego Turnpike roadway for a short period and then continued on upward, close to the Owego Turnpike, but remaining to the south of it, which can be seen in the map detail given below:

Given below is a detail from the 1895 Gravity Railroad map volume. Shown on it are many details about the 1829 and 1845 configurations.



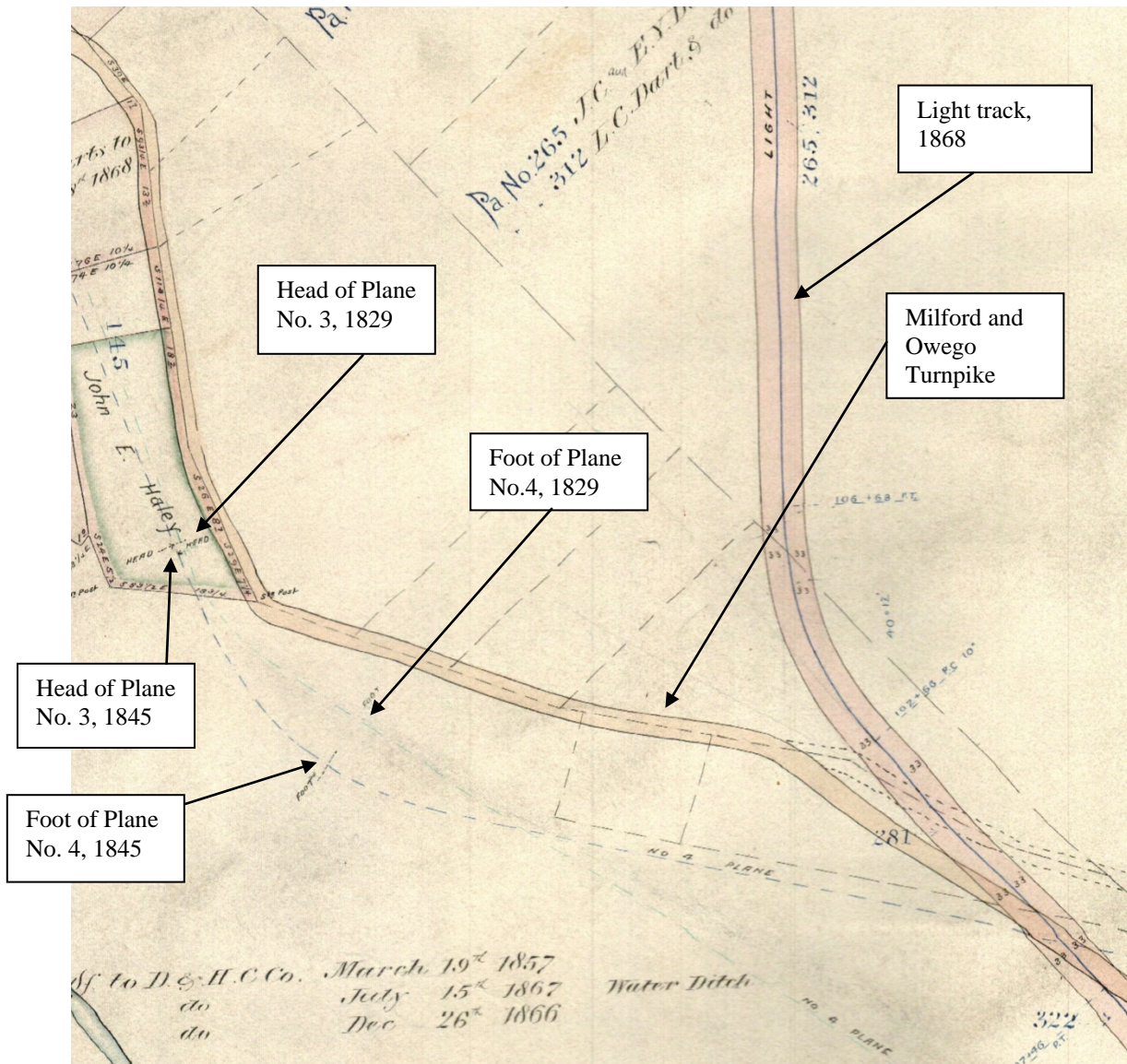
Racket Brook
Breaker at
Plane No. 4

Plane No. 4,
1859, 1868

Head of Plane
No. 3, 1829

Head of Plane
No. 3, 1845

The head of Plane No. 3, both in 1829 and in 1845, is shown on the two details (the second is a close up) given below from the 1895 Gravity Railroad map. Note that in both configurations, the heads (marked on the map just under the word “Haley”) are just about opposite each other.



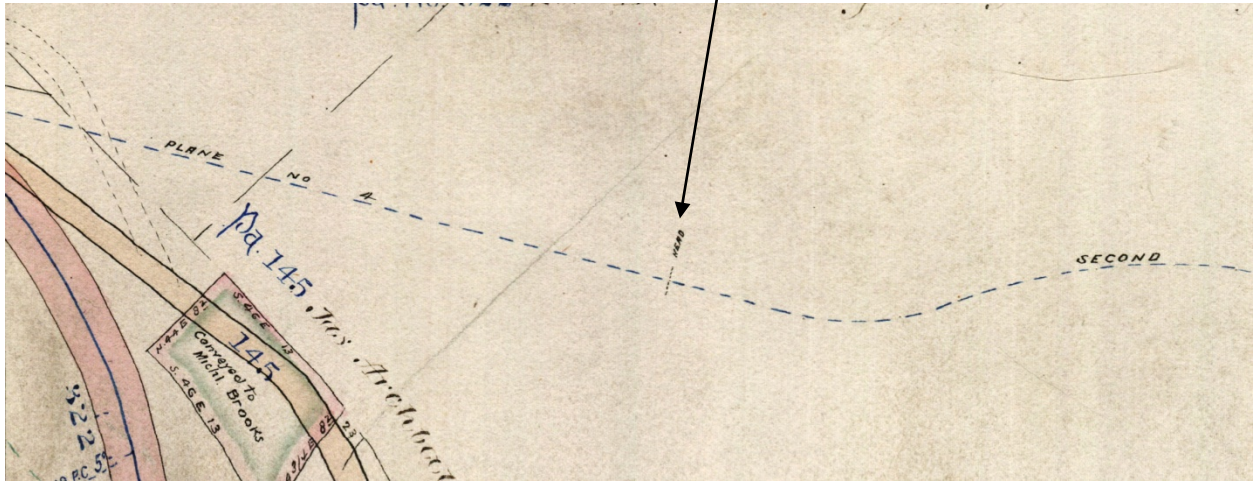


Plane No. 3, 1845, "Both Tracks,"
i. e., loaded and light

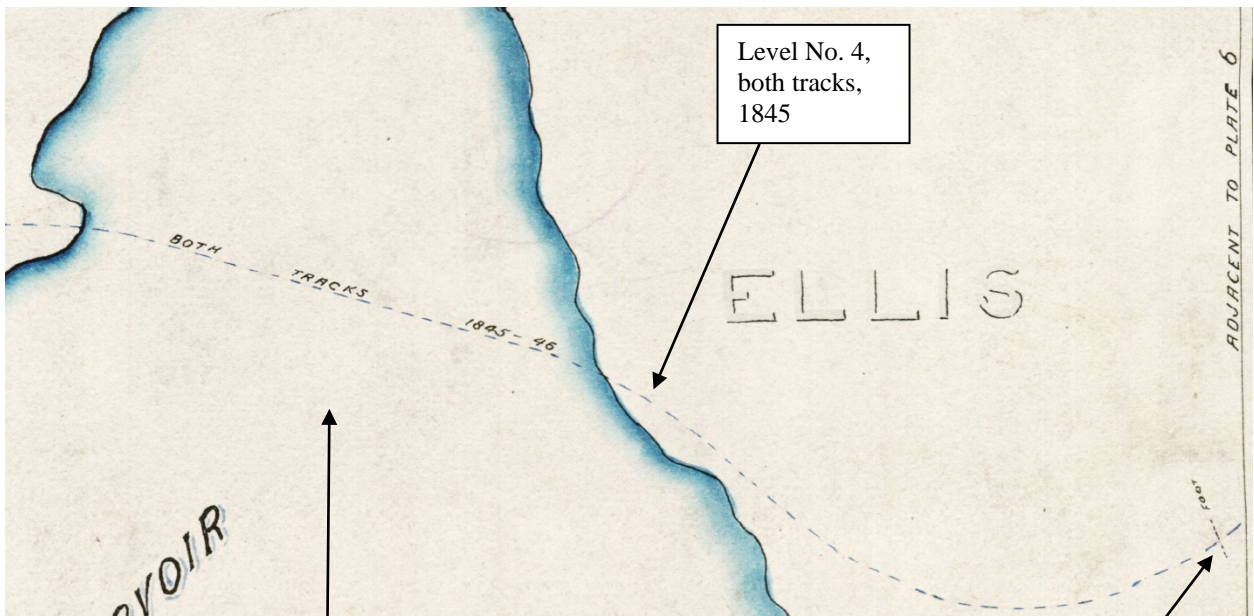
Note how far north the rail
operations of the Racket Brook
Breaker extended.

Plane No. 3,
1845

Head of Plane No.
4, 1845



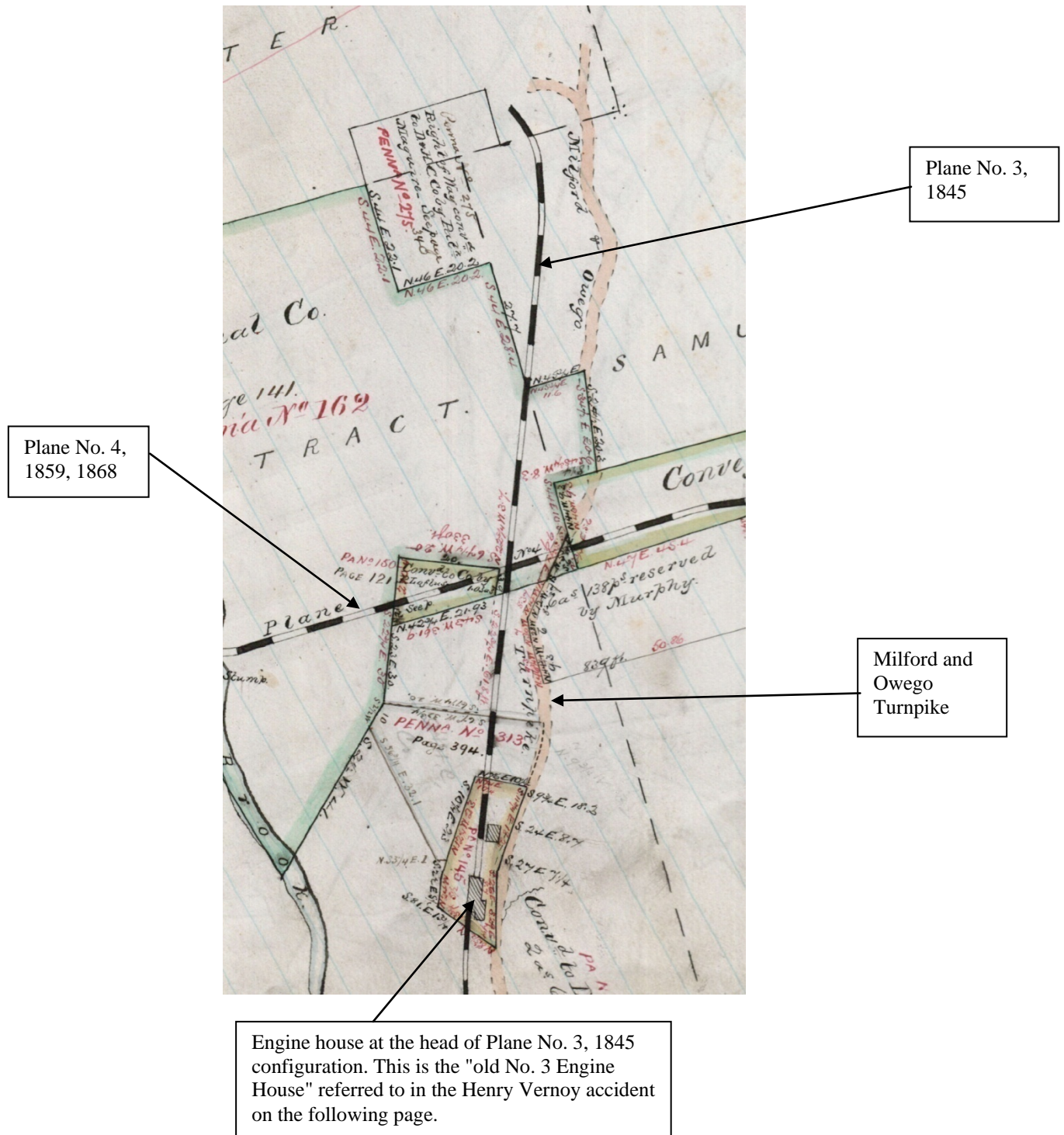
Level No. 4,
both tracks,
1845



No. 4 Reservoir

Foot of Plane No. 5,
1845

All of Plane No. 3 (ascending the hill from the top of the map to the bottom of the map) in the 1843 configuration can be seen on the map given below from *D&H Deeds Luzerne I*, page 11. This map illustrates the deed, pp. 7-13, dated July 28, 1825, between John Wurtz & others, Trustees, and The Delaware & Hudson Canal Company.

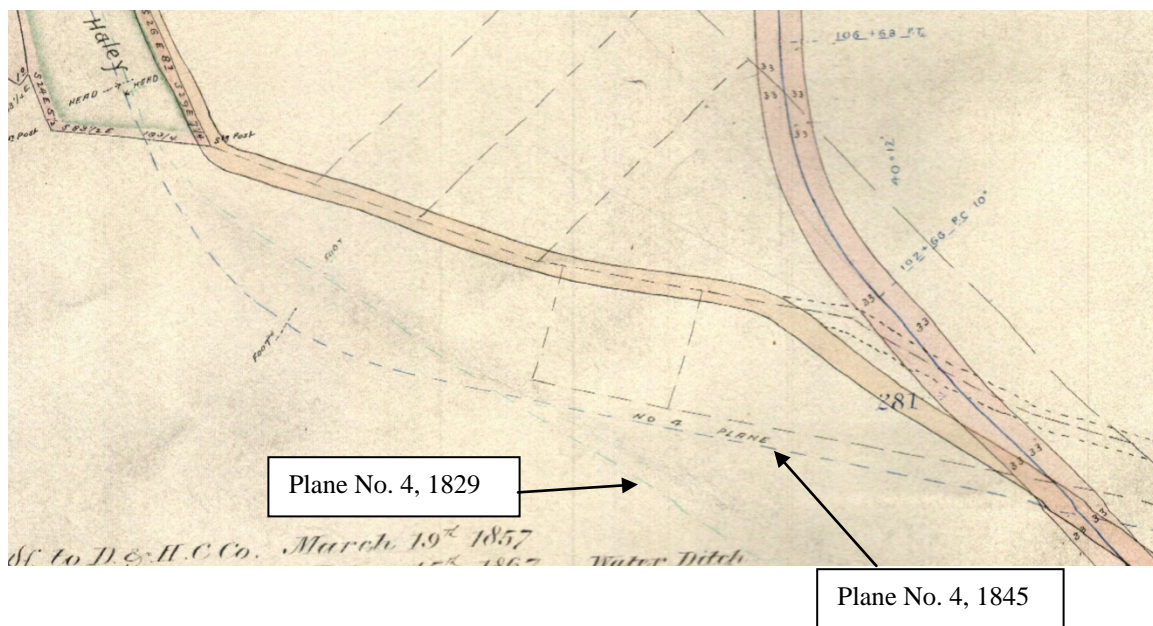


Accidents, Facts about the Plane, Daily Life

Accident in 1868 at “old No. 3 Engine House” (which is pointed out on the map on page 69). “Old No. 3 Engine House in 1868 would have been No. 3 in the 1845 configuration. No. 3 engine house in 1859 and 1868 would have been just above the Artesian Well.

Henry Vernoy in accident near old No. 3 engine house:

“Dangerous Accident. / Mr. Henry Vernoy of our city while returning home on Thursday morning met with an accident near old No. 3 Engine House on the mountain. His cutter upset, and he was thrown out, striking on his feet. But the horse started on a run dragging him down and throwing him violently against a rock, injuring his shoulder severely.” (*Carbondale Advance*, January 4, 1868, p. 3)



At this point, as can be seen on the map detail given immediately above, two entirely separate paths (one for the 1829 roadbed, one for the 1845 roadbed) for Plane No. 4 were established.

Just east of the foot of No. 4 Plane in 1829 and the foot of Plane No. 4 in 1845, the paths of the two planes cross, with the 1845 Plane No. 4 going up the incline to the left of present-day No. 4 Pond and around to the back of the pond, crossing a section of the reservoir and then going on up

the hill, and with the 1829 Plane No. 4 ascending the incline below and to the right of No. 4 Pond (the Route 6 side) to the head of Plane No. 4 there, and then on to Plane 5 to the top of the mountain (both No. 4 and No. 5 in 1829 on the Route 6 side of No. 4 Pond).

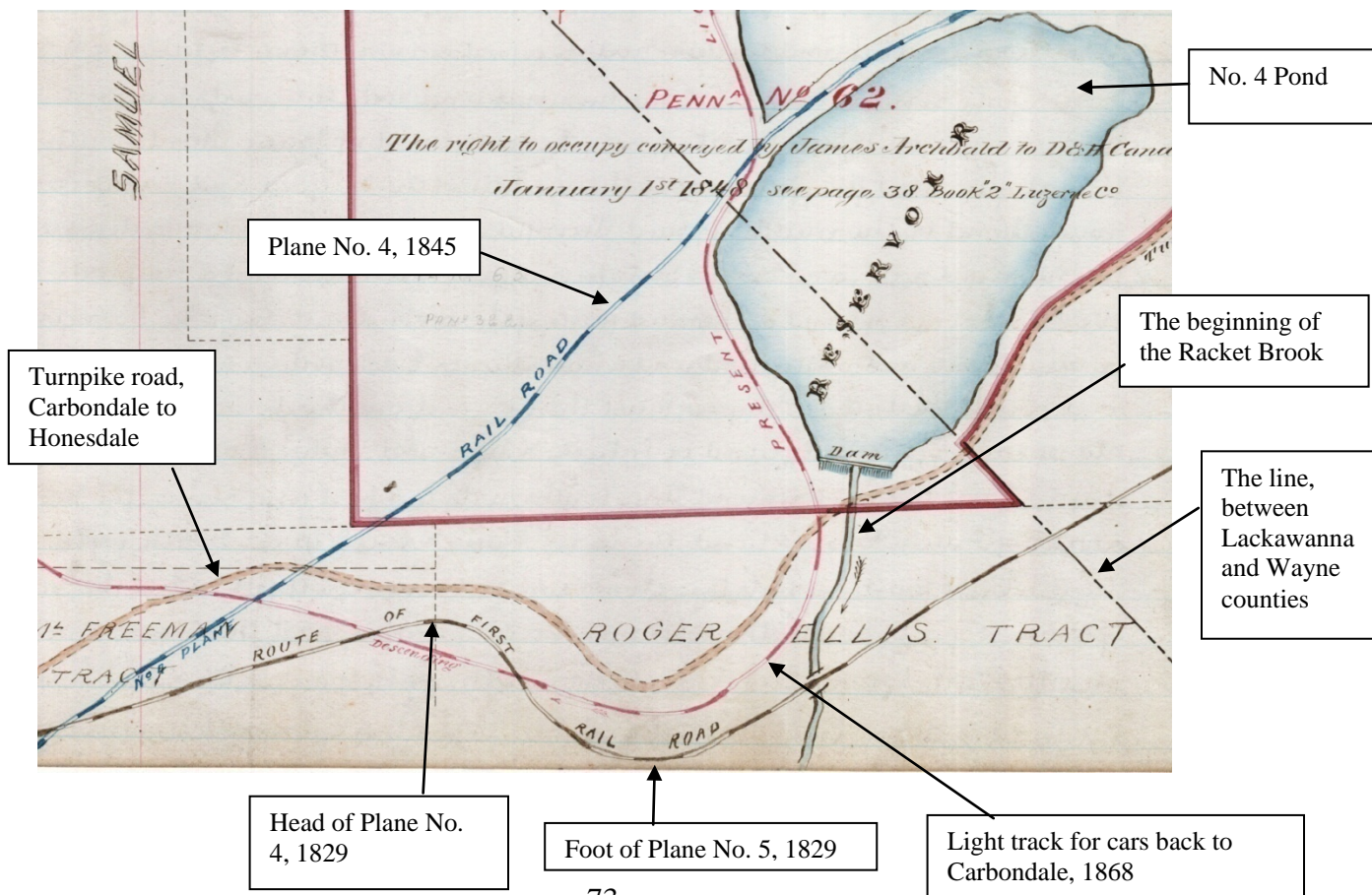
4510

Plane No. 4

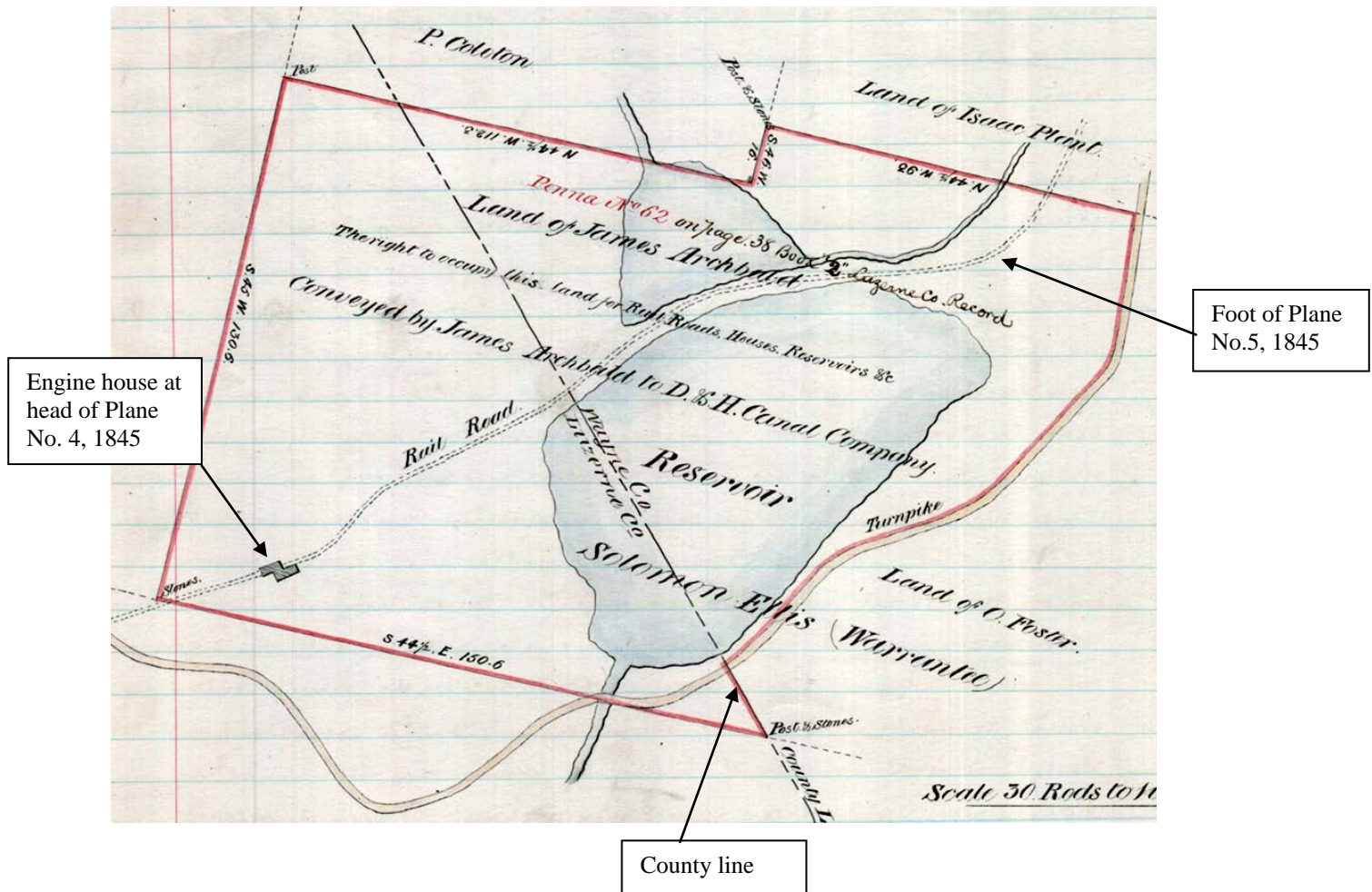
Engineers at the head of the plane:

"No. 4, John C. Davis came from New York with others of the first engineers to put up the engines [emphasis added], and was given the position as engineer, followed by Peter Campbell; Patrick Archbald, Charles Ball, who was killed June 7, 1845 [see newspaper report immediately below], while working about the engine, and Patrick Grattan, who was on the new road was transferred to No. 5." (Joslin/Davies)

The "Route of First Rail Road," the 1829 configuration, in the Number 4 Pond area, is shown on the map below in black ink; the 1845 configuration in blue ink; the 1868 configuration in red ink. Note that Plane No. 4, in the 1845 configuration, crosses a section of the rear of No. 4 Pond. This map illustrates the release, dated August 11, 1856, between Henry Edgett / Horatio N. Edgett and The Delaware and Hudson Canal Company. That release is given on page 274 of D&H Deeds PA; the map on page 275. Here is the relevant section of that map:

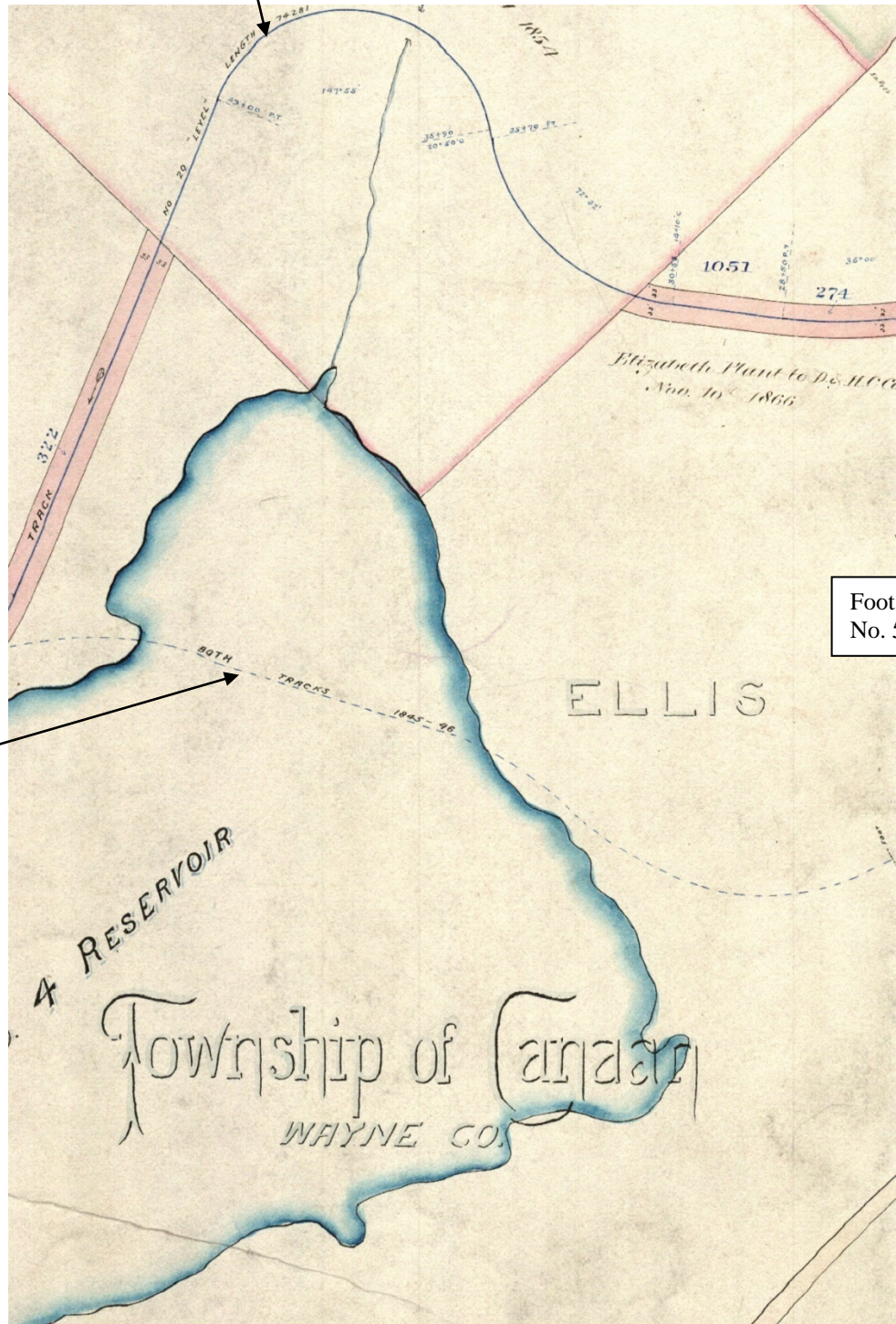


In the *D. & H Deed Book – Wayne*, on page 42 there is a map that illustrates the deed, pp. 41-42, dated January 1, 1848, between James Archbald and wife and The Delaware & Hudson Canal Company. Note that the loaded track crosses the back part of No. 4 Pond in this, the 1845 version of the roadbed. In the 1829 version, planes 4 and 5 of the railroad were located on the turnpike/Route 6 side of Number 4 Pond. In the 1859 version of the roadbed (when there were 8 planes to the top of the mountain), Number 4 Plane was a good distance down the hill and didn't go anywhere near Number 4 Pond.



A closer look at Plane No. 4 (marked on the map “Second Location of Gravity Road”) as it approaches No. 4 Pond is given on the map detail given below:

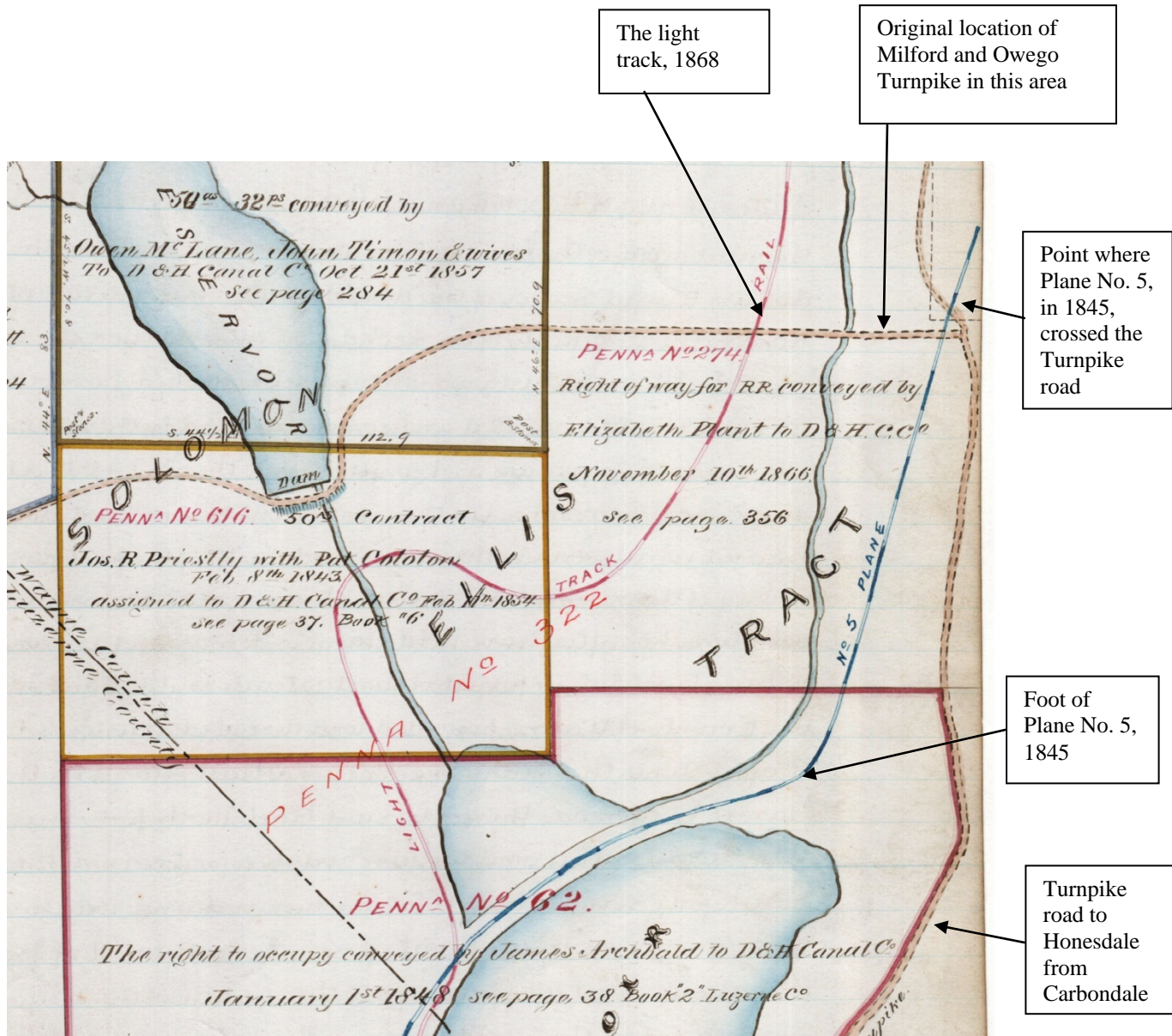
Light track for return of empty cars to Carbondale,
1868. This track ran between No. 7 and No. 4
ponds.



Level No. 4,
1845

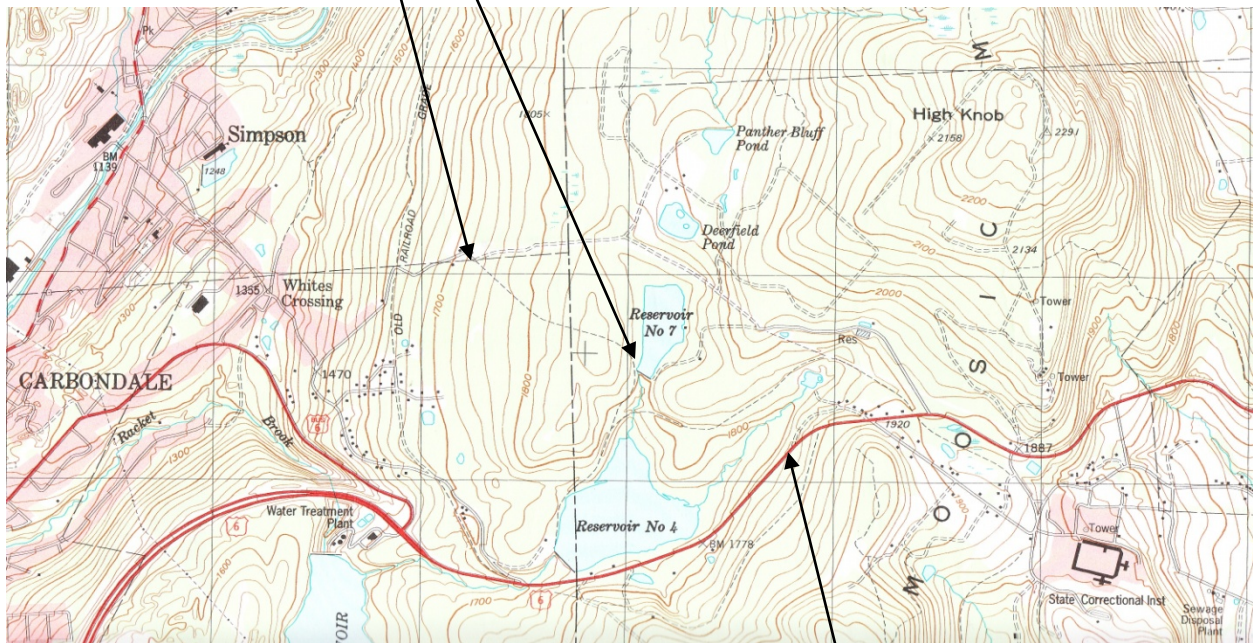
Foot of Plane
No. 5, 1845

A second look at the 1845 location of portions of Planes 4 and 5 is provided on the map that illustrates the release, dated August 11, 1856, between Henry Edgett / Horatio N. Edgett and The Delaware and Hudson Canal Company. Those 1845 planes are delineated in blue ink. (The roadbed indicated in red ink is part of the 1868 configuration and will be discussed in a subsequent section of the present work.) That release is given on page 274 of D&H Deeds PA; the map on page 275. Level No. 4 Plane 4 crossed through the rear portion of No. 4 Pond/Reservoir; Plane No. 5 ascended on up to the top of the hill. Here is a detail of the map on page 275 that illustrates the release in question:



A portion of the Milford and Owego Turnpike in its original configuration in this area (see above map) is shown on the 20th century USGS topographical map of this area, as seen in the detail below. Special thanks to Ed Hodorawis for bringing to our attention this 20th century map.

After passing very close to the dam at Reservoir No. 7, the Milford and Owego Turnpike continued West, as is shown by the dotted line on this map detail



At about this point, the original Milford & Owego Turnpike cut off and headed directly for Reservoir No. 7

Accidents, Facts about the Plane, Daily Life

Charles Ball killed in accident at No. 4:

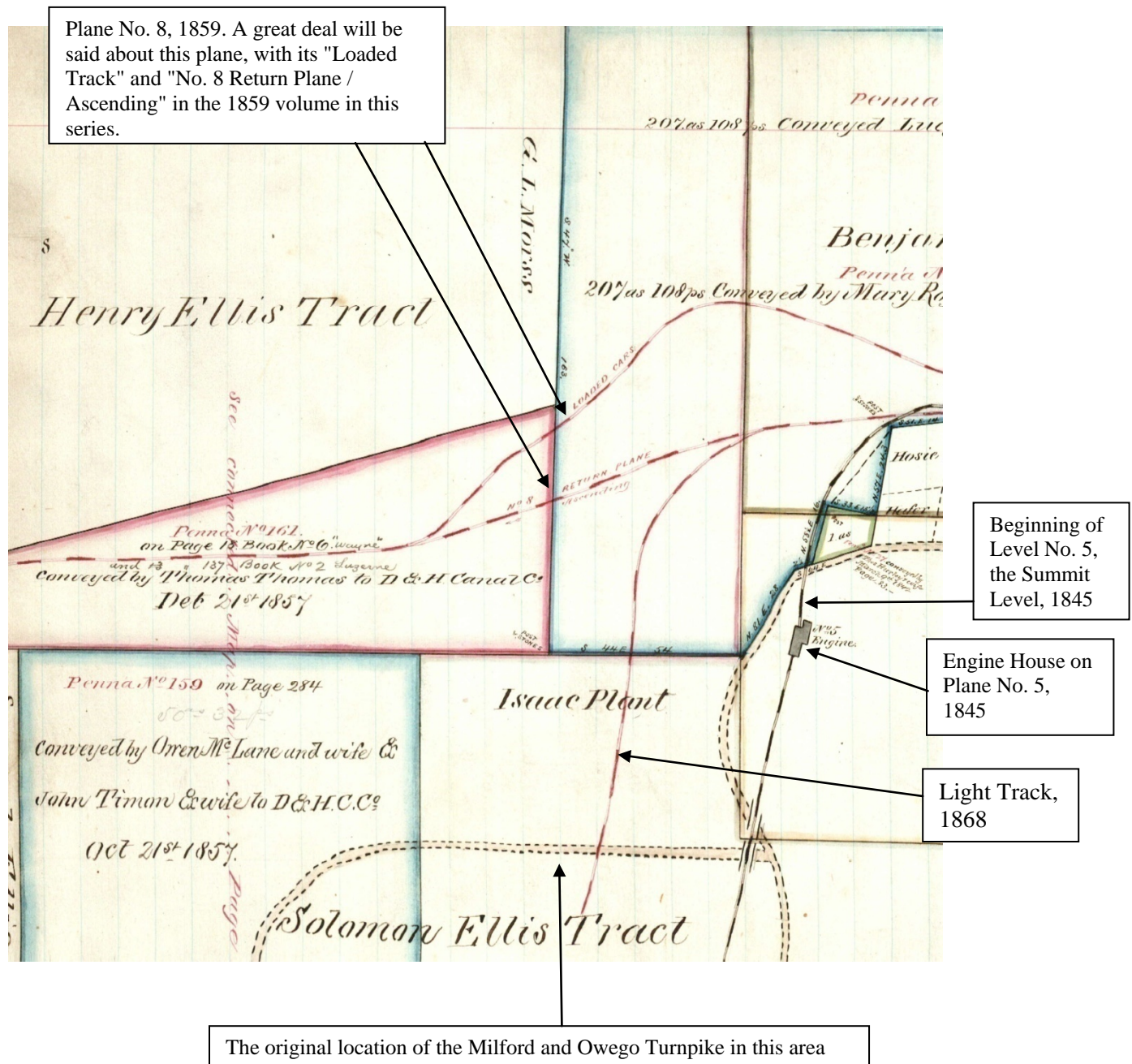
"SHOCKING ACCIDENT AND DEATH!—This morning, Mr. CHARLES BALL, Engineer at the head of No. 4 plane, fell between the arms of the sheive wheel, by which he was almost instantly crushed. His limbs and body were dreadfully mangled, and broken. He expired in about 15 minutes, leaving a young and fond wife, and a large circle of friends to lament his fate." (clipping in Gritman scrapbook, dated "Carbondale: Saturday, June 7, 1845")

4511

Plane No. 5

"The second road [1845 Configuration] had five planes also, the fifth being located northeast of No. 4 reservoir." See "Engines with a History," under Plane 22 in the section titled "Extension to Valley Junction.")

In the *D. & H. Deed Book – Wayne*, on page 280, there is a map that illustrates the deed, pp. 276-79, dated March 31, 1857, between Lucy Rogers and the Delaware & Hudson Canal Company. On that map, in the view given below, in black ink, the engine house at No. 5 and the beginning of the Summit Level (Level 5) are shown. (The roadbeds shown in red ink are portions of the road as configured in 1859 and 1866.) Here are those two map views:

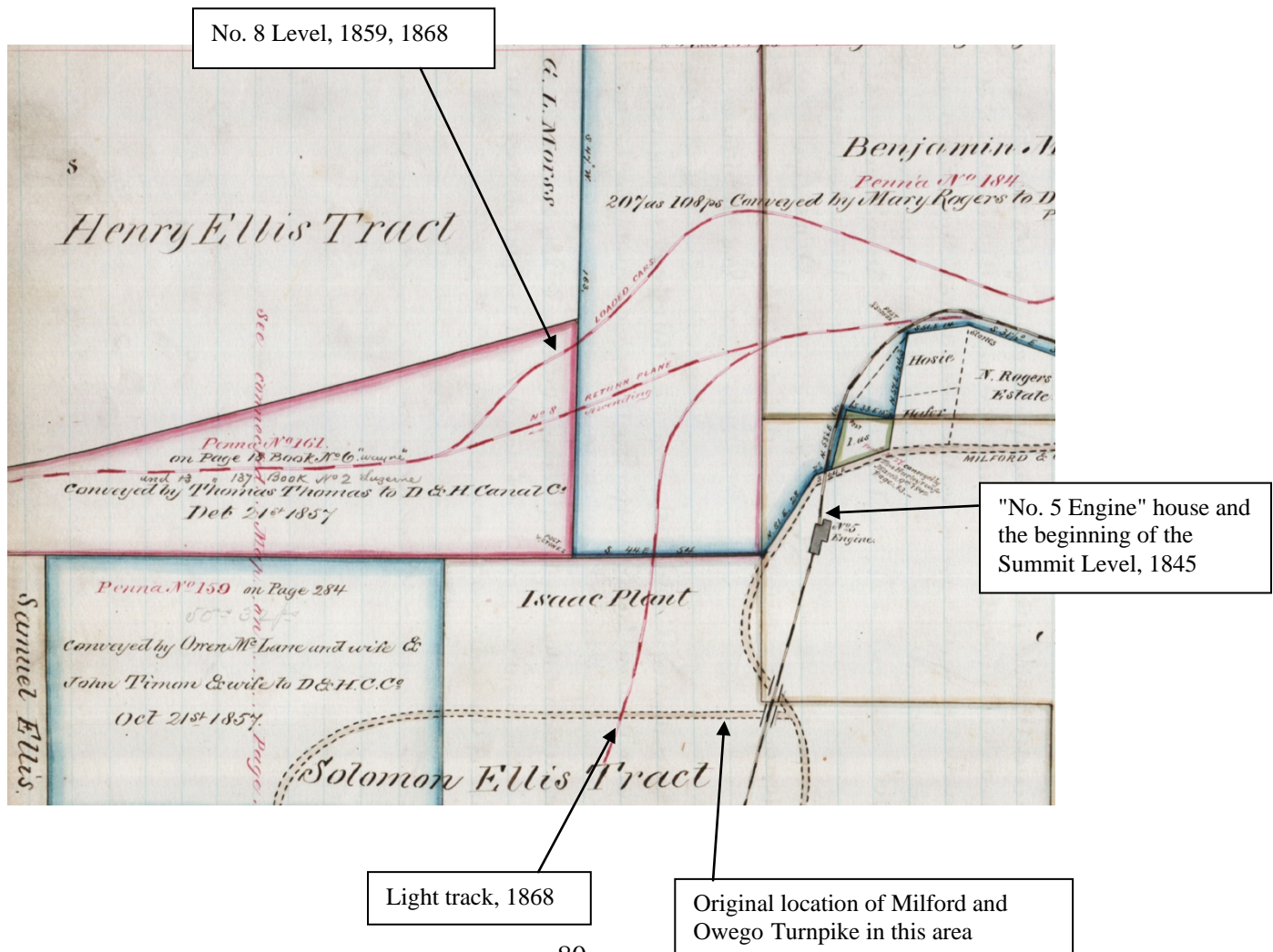


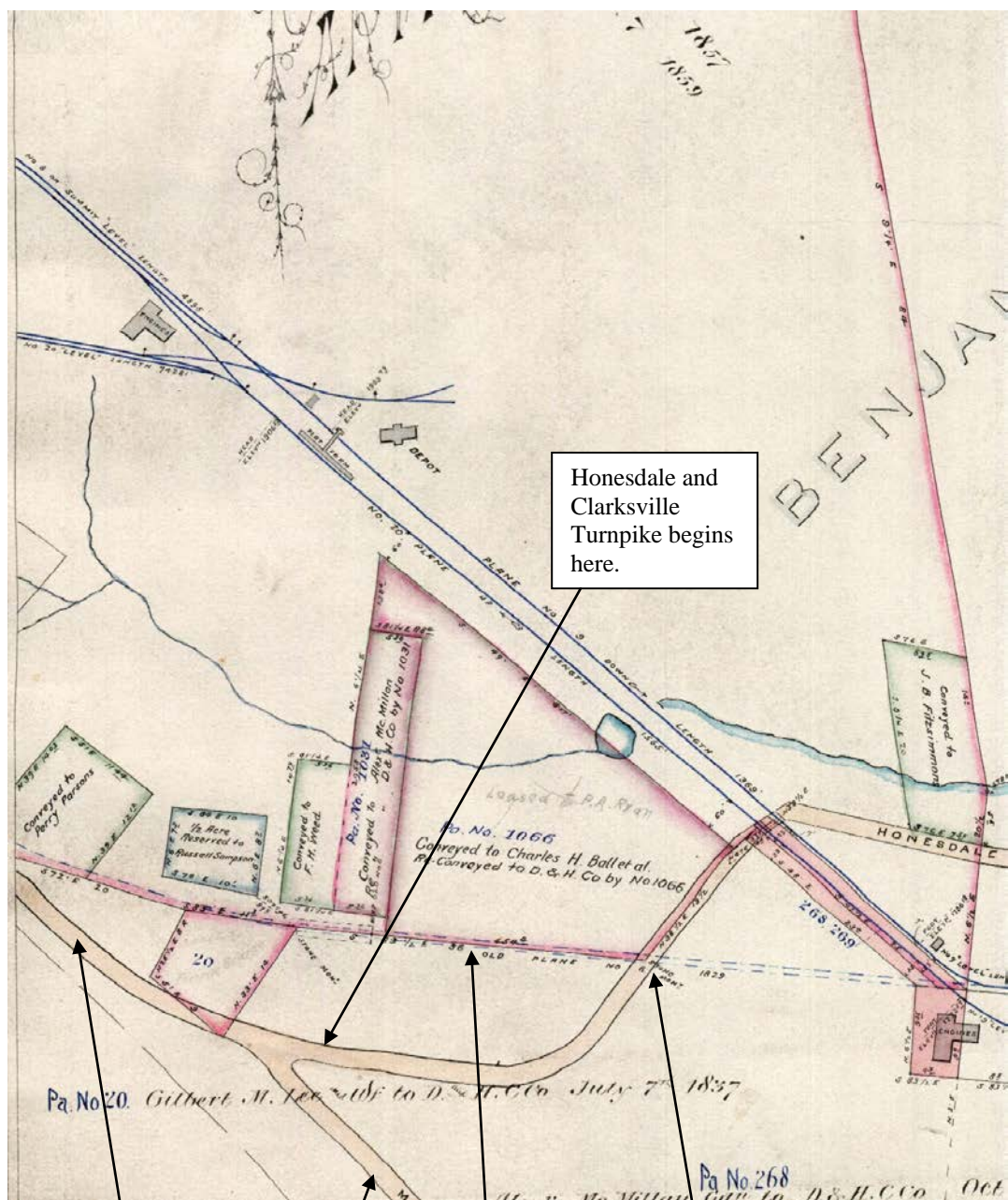
The Summit Level, 1829, 1845

Map on page 280 in D&H Deeds PA that illustrates the deed, pp. 276-279, dated March 31, 1857, between Lucy Rogers et al. and The Delaware and Hudson Canal Company. Given below is a detail from that map. (The roadbeds in red on this detail are portions of the 1859 and 1866 roadbeds and will be discussed in later sections of the present work.) At the eastern end of the Summit Level was Engine House No. 6. In 1829 and in 1845, Plane No. 6 was the first of the two downhill planes from Farview to Waymart.

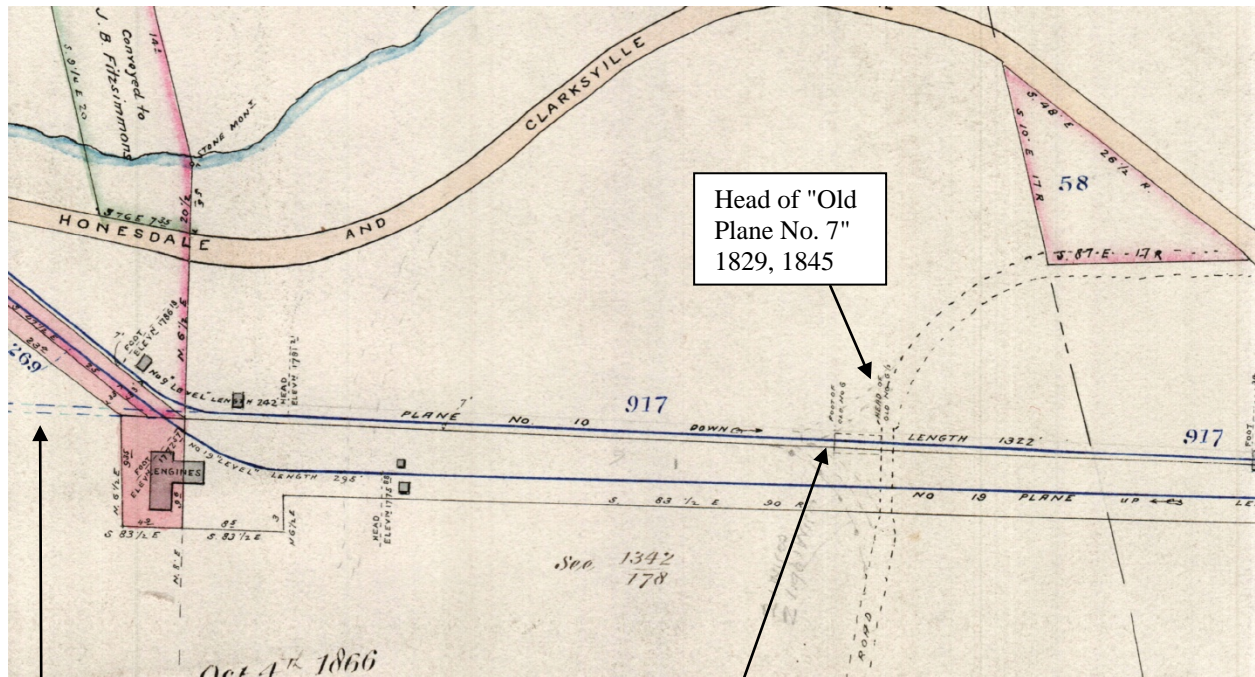
The level from the head of Plane No. 5 (1829, 1845) to the head of Plane No. 6 (1829, 1845) was also known as the Summit Level. But the location and length of the Summit Level in both of those years was different because Planes No. 4 and 5 were in different locations in both of those years.

Shown on the map below are Engine House No. 5 and the beginning of the Summit Level in 1845.





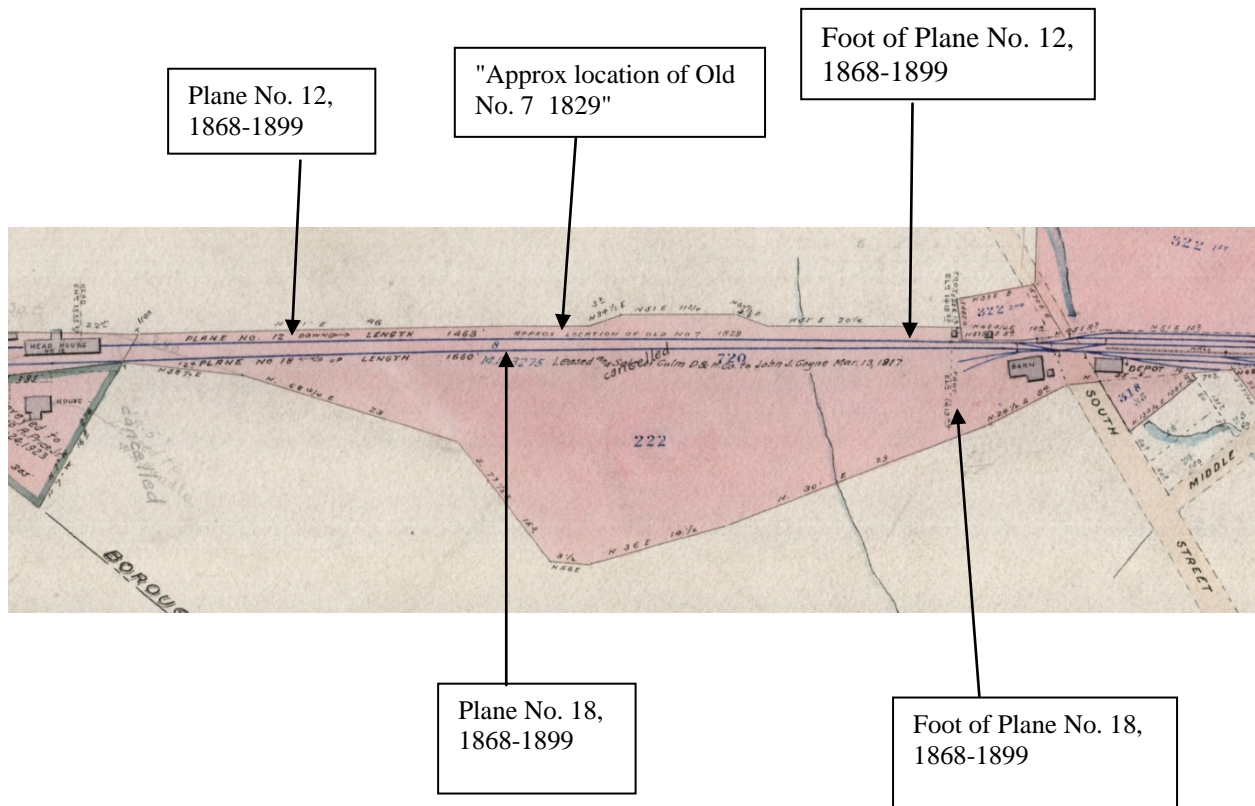
The foot of "Old Plane No. 6" (i.e., Plane No. 6 in 1829, 1845) was in the middle of what would later become Plane No. 10, as we can see on this detail given below from the 1895 Gravity Railroad map volume. Also shown on this map is the head of "Old Plane No. 7," 1829, 1845



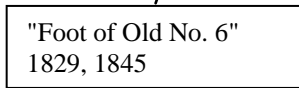
"Old Plane No. 6" as it descends the mountain, 1829, 1845

"Foot of Old No. 6" 1829, 1845

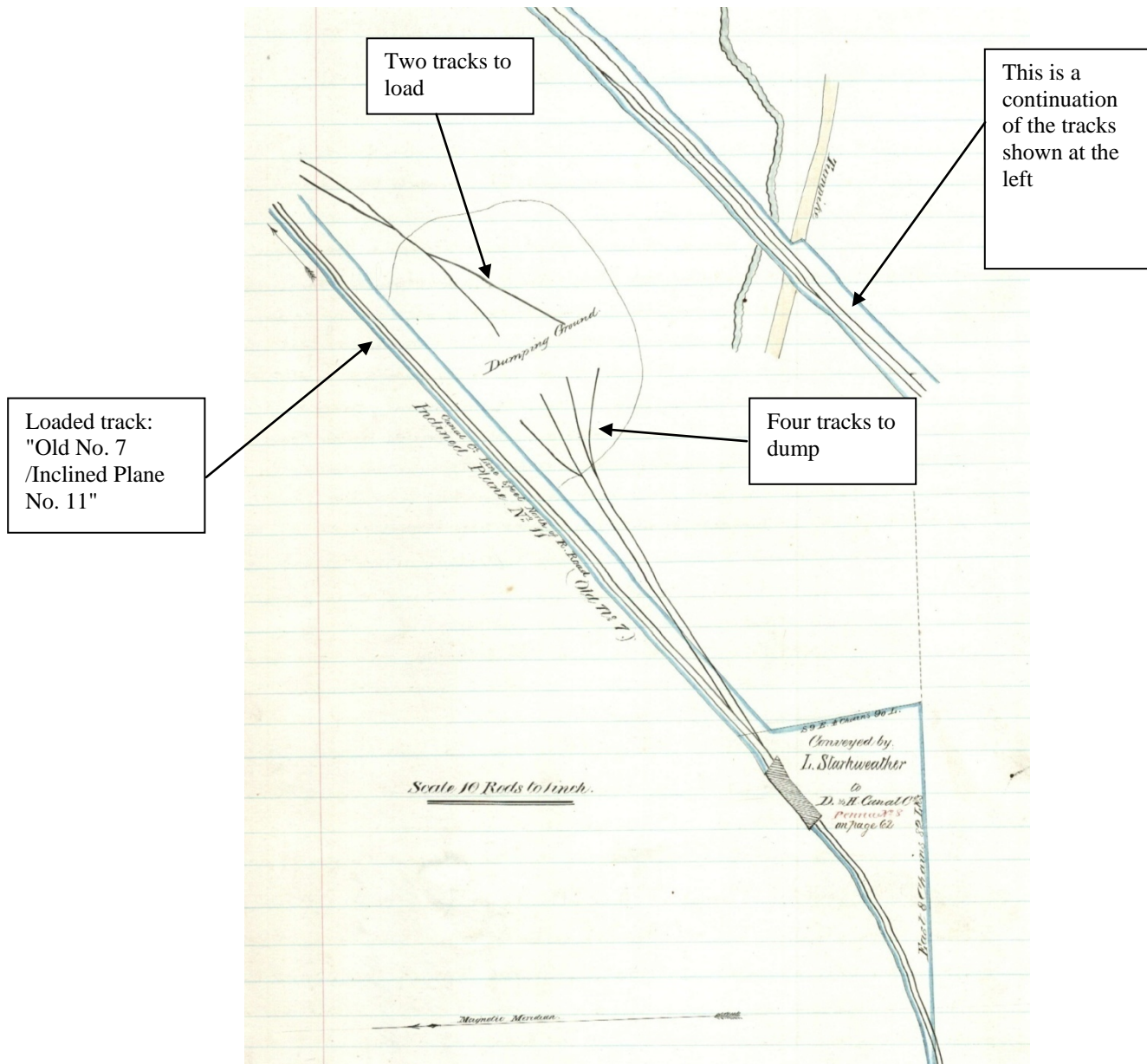
The "Approx. location of Old No. 7 1829" and 1845 is shown on the detail given below from the 1895 Gravity railroad map volume.



Detail, showing head of "Old Plane No.7" 1829, 1845 configuration:



In the *D. & H. Deed Book – Wayne*, on page 6, there is a map that illustrates the deed on page 5, dated November 20, 1829, between Leonard Starkweather and wife and The Delaware & Hudson Canal Company. On that map, Old No 7 (later to become Plane No. 11) and the Dumping Ground at Waymart are shown. Four tracks to dump; two tracks to re-load. Here is that map.



Accidents, Facts about the Plane, Daily Life

New stationary engines on Plane No. 5 in 1846:

“New stationary engines from the shops of William Burden, Brooklyn, NY, were installed on this plane [No. 5] in 1846. William Ball was master mechanic at that time. Orlando Foster [see death notice immediately below] was the first engineer to run them. He did so until 1858, when he was transferred to the summit engine, No. 8. In 1858, the stationary engines from this plane were moved to Plane No. 25; in 1862, they were moved to Plane No. 22.” See “Engines with a History,” under Plane 22 in the section titled “Extension to Valley Junction.”

Death of Orlando Foster in 1872:

“Another Landmark Gone--Reminiscences of the Olden Days. / Mr. Orlando Foster, for forty years past well known as the Engineer at No. 5, died on Friday last at his residence three miles east of town, on the Turnpike that passes over the mountain to Waymart. / As might well be believed from his having enjoyed the uninterrupted confidence of the Company during a forty years service, he was a man of unflinching integrity, of much intelligence and universally respected. He kept himself constantly well informed of current events, and was a constant subscriber to his own local paper and many others. Our books show the somewhat remarkable fact, that he has received every number of the papers we have published in this city—extending from the year 1845 through a period of twenty-seven years, and has invariably paid promptly. Always a moral man, he was some months since the subject of deep religious impressions, and we are informed that under the counsel of Rev. Mr. Best, of Waymart, and other devoted christian friends he was led to indulge hope in Christ, and gave evidence of a saving change. His bereaved wife, his children, and a large circle of friends mourn his loss. He age was about 60 years. / Thus has passed away the last of the early engineers on the Mountain section of the Del. & Hud. C. Co.’s Railroad—of those in service in the year 1837, the date when our residence in Carbondale commenced. They were a body of capable and intelligent men, embracing, we believe, Gritman Brown at No.1, James Johnson at No.2, John C. Davis at No. 3, Peter Campbell at No. 4, and Orlando Foster at No. 5. These embraced all the steam engines to haul the coal to the summit of the Mountain. Wm. Ball, esq. resident at No. 1, was then and for many years after Superintendent of all the engines. The positions held by these engineers were considered very honorable and lucrative, the best in the Company’s gift below Superintendents. [emphasis added] Of the men then Superintendents few survive, and none are now resident here. James Archbald, esq., who died at Scranton about two years since, greatly lamented, had general charge, James Clarkson, esq., now residing in Benton, was Superintendent of the Mines, John H. McAlpine, Superintendent of the Machine Shop, (but he soon after resigned and was succeed by James Dickson, esq.,) and R. E. Marvine, esq., now resident at Green Ridge, was Accountant and Pay master. Everything was then new, and all departments managed with great energy and economy. The operations were on a comparatively small scale. From 300,000 to 400,000 tons of coal was considered a fair annual product. But it was in those days that the solid foundations were laid for the immense expansion that has since taken place, and those gigantic enterprises which now

make the Del. & Hud. C. Co. the object of admiration, and its stupendous achievements one of the wonders of the age. [emphasis added] / The men that thus laid deep the foundations for these great results, have nearly all completed their earth-work, and left to others their positions and responsibilities.” (*Carbondale Advance*, April 6, 1872, p. 3)

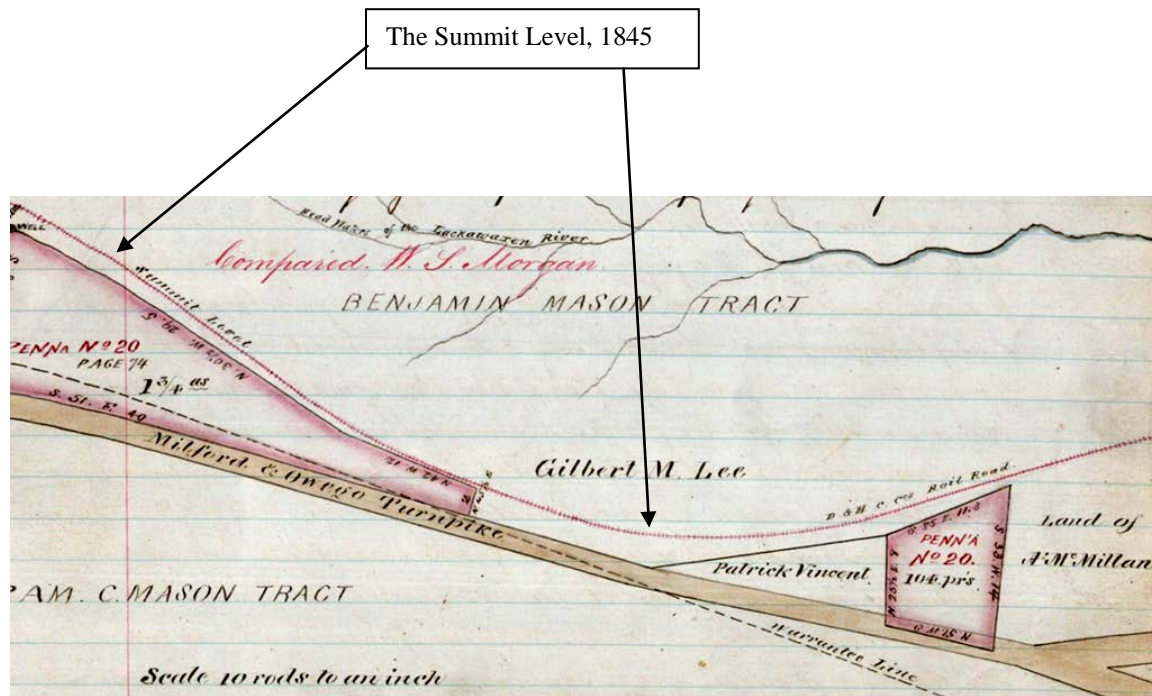
Lost Creek near old No. 5:

“Lost Creek is the name of a new place just springing up near old No. 5. It is a great place for fast horses—that is, they get fast in the mud.” (**GRAVITY NOTES**, *Carbondale Leader*, March 26, 1886, p 4). This note is from 1886, which means that “old No. 5” must be the No. 5 that was in the 1845 configuration; new No. 5 was installed in 1859 and remained the same in 1868.

The Summit Level, from head of Plane No. 5 to head of Plane No. 6: three quarters of a mile long:

“Upon arrival at the summit of the mountain, the road as originally constructed extended one and three-quarters miles with a very slight descent in favor of the loaded cars. Mr. Archbald’s reconstruction decreased this to three-quarters of a mile, and a more favorable descent was obtained.” *COP*, p. 134-35:

A portion of the 1845 Summit Level is also shown on the map that illustrates the deed, dated July 7, 1837, between Gilbert M. Lee and wife and The Delaware and Hudson Canal Company that is given on pages 74-75 of the D&H Deeds PA. The map is on page 75. Here is the relevant portion of that map:



Accidents, Facts about the Summit Level, Daily Life:

4512

Plane No. 6

The first of the two planes down from Farview to Waymart:

In the *D. & H. Deed Book – Wayne*, on page 280, there is a map that illustrates the deed, pp. 276-79, dated March 31, 1857, between Lucy Rogers and the Delaware & Hudson Canal Company. On that map, in the view given below, in black ink, “Old No. 6 Plane” [the one in the 1845 configuration] is shown. (The roadbeds shown in red ink are portions of the road as configured in 1859 and 1868. From 1859 on, the downhill descent began with Plane 9. On the map given below the engine at the head of Plane No. 9 was located a short distance to the left of the words “Plane No. 9”, to the right of center of the map. In the 1829 and 1845 versions of the road, the downward descent began at the engine house at the head of No. 6 Plane.) Note also that the “Head Waters of the Lackawaxen River” are in this area at the top of the Moosic Mountain. Here is that map:

In the *D&H Deeds PA* book, on pages 62-63, there is a map, p. 63, that illustrates the deed there, dated November 20, 1829, between Leonard Starkweather and wife and The Delaware and Hudson Canal Company. On that map, the lower portion of Plane 6, Level 6, and Plane 7 are shown. Given below is that map, accompanied by the Key to the map that is also given on page 63. Given the quantity of details about the site and the clarity with which they are presented by the mapmaker, this map takes on the quality of a photograph.



<u>Explanation</u>	
N ^o 1	A Roll way
" 2	A Roll way
" 3	House at foot of Plane N ^o 7
" 4	Drain from the Pit of the Engine House at head of Plane N ^o 7
" 5	Engine House
" 6	Dwelling House
" 7	Drain from Excavation above the Engine House
" 8	House at foot of Plane N ^o 6.
Single dotted line the line of Rail Road.	
Land sold to the Canal Company enclosed in black lines on each side of the line of Rail Road and are the nearest full lines thereto.	

Accidents, Facts about the Plane, Daily Life

Several deaths by lightning in August 1850:

"Deaths by Lightning. / This season has been unusually characterized here by frequent and severe thunder storms, but we have not been called upon since early in the spring to record any deaths produced by the electric shaft. The storm of Monday afternoon last was fatal in two instances. We have not particulars of either, but understand, one man engaged in grinding a scythe in Canaan township, near to No. 6 engine, was suddenly killed, and three men engaged at work upon the Leggitts Gap Railroad, one by the shaft, and the other two by the falling of a tree struck near them." (*The Lackawanna Citizen, and Carbondale Democrat*, Friday, August 9, 1850, p. 2)

Plane No. 7

The second of the two downhill planes from Farview to Waymart in the 1829 and 1845 configurations. The plane, in 1845, was 1,685 feet long. It is shown on the map given above for Plane No. 6.

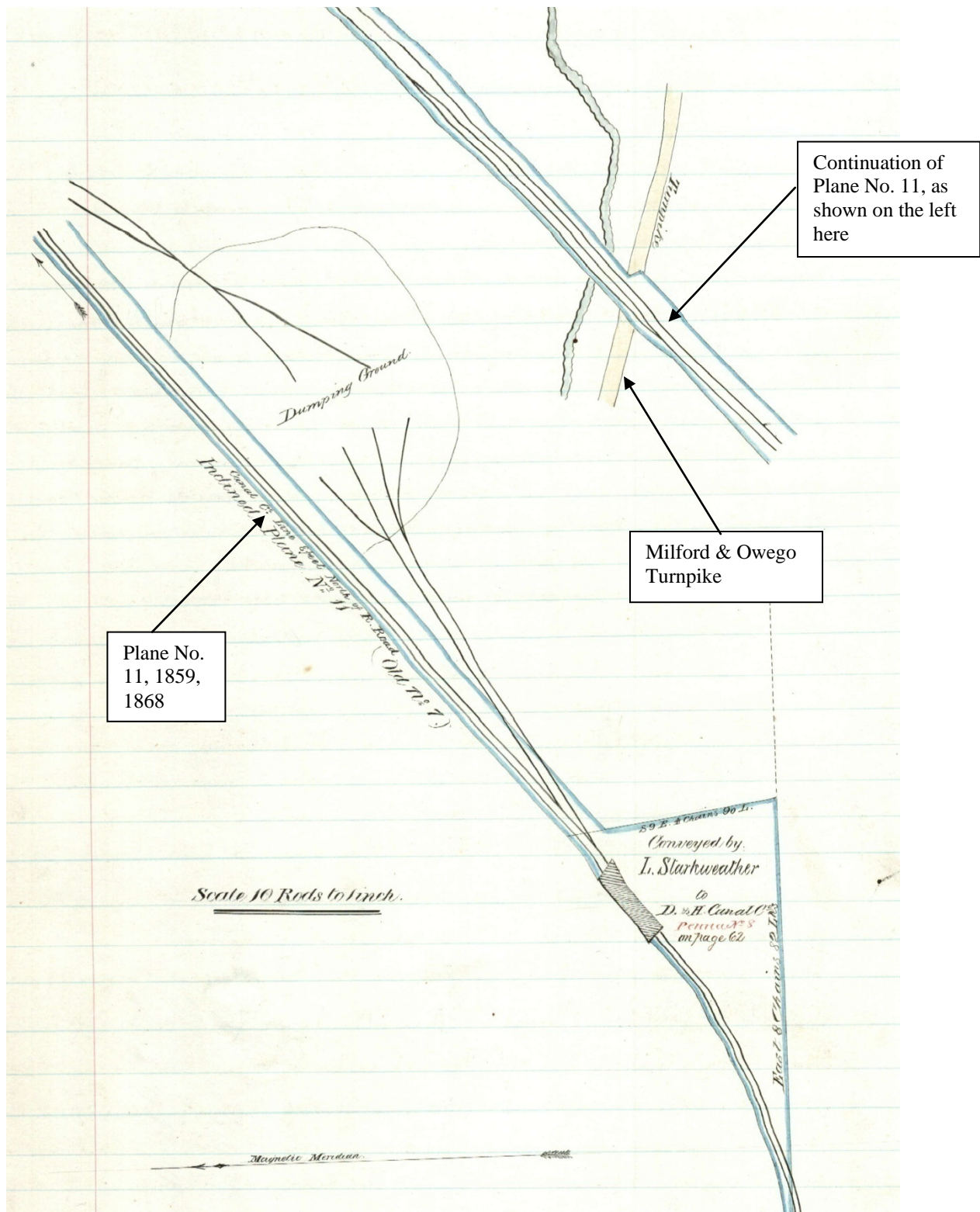
Accidents, Facts about the Plane, Daily Life

The **Waymart Dumping Ground** was along Plane No. 7

--located to the right of descending Plane No. 7 in the 1845 configuration (from 1859 to 1868, this would be Plane No. 11; dumping ground on the right of descending Plane No. 11): see the map given below.

In his report to President John Wurts of 1847, James Archbald states: "There is a short piece of road from foot of No. 6 to head of No. 7 the next descending plane, as also that plane, remaining as at first constructed. Some additions and improvements to the machinery at the head of this plane is all that is required here. It is at this point of our road where we are making [in 1847] preparation to deposit coal whenever the ground at Honesdale becomes filled up or when deep snows make it difficult and expensive to keep our road open the whole length [emphasis added]."

In the *D. & H. Deed Book – Wayne*, on page 6, there is a map that illustrates the deed on page 5, dated November 20, 1829, between Leonard Starkweather and wife and The Delaware & Hudson Canal Company. On that map, Old No 7 (later to become Plane No. 11, 1859-1868) and the Dumping Ground at Waymart are shown. Four tracks to dump; two tracks to re-load: Here is that map.



Hensel stereograph card No. 1116: *Waymart, seen from Old Dumping Ground*



The Dumping Ground referred to above is where coal was unloaded and temporarily warehoused at Waymart. This dumping ground was established in 1847, and was no longer used as such in 1879 when Hensel took his photograph titled “Old Dumping Ground”

At the time that Hensel produced Stereograph Card No. 1116, 1879, shown above, the “Dumping Ground was no longer a reality, since in the title of that card the Dumping Ground is referred to as the “Old, i. e., “former” Dumping Ground.” When the “Old Dumping Ground” ceased to be used as such (before 1879) is not yet known. A photograph of coal storage piles at Waymart is not known to exist.

Statements in print about coal dumping/storage in piles at Waymart are rare. One of those rare instances is in the “Statement of the business of the Delaware and Hudson Canal Co. for the year ending March 1, 1855.” Therein, we read: “Coal on hand, being principally in pile at Honesdale and Waymart, and in boats on line of Canal.....\$184,092.00.” (*Carbondale Transcript and Lackawanna Journal*, April 6, 1855, p. 2)

In 1855 (we learn from the above clipping) that coal was being dumped/stored at Waymart. In early July 1862, coal was apparently not being dumped at Waymart. This we know from the clipping given immediately below, from which we learn that the D&H temporarily stopped mining and shipping coal at that time because (1) the repairs to the D.&H. Canal then being made were taking longer than expected and, (2) because the Honesdale coal pockets were full.

“The Coal Business. / The repairs upon the Canal of the D. & H. C. Co., are taking more time than was at first expected. It is now expected to be ready early next week. The amount of coal stored at Honesdale has reached its maximum, and the Company has been obliged to discontinue mining and sending it over the Railroad until shipments can be made on the canal.” [emphasis added] (*Carbondale Advance*, July 12, 1862, p. 3)

In early April, 1863, however, with the coal pockets at Honesdale nearly filled, the D&H did not stop mining and shipping coal over the Gravity Railroad. Rather, they dumped/stored coal at Waymart:

Coal being dumped at Waymart, 1863:

“Coal Shipments. / It will be seen by reference to the published statement that the D. & H. C. Co. have already mined and shipped over the railroad to Honesdale upwards of 200,000 tons of coal the present season. This is a larger amount than was ever before forwarded, we believe, this early. The pockets at Honesdale, we learn, are nearly filled, and the coal is now being dumped at Waymart. Some difficulty is experienced in emptying the cars there fast enough to prevent obstruction. [Emphasis added] / We are glad to learn that miners and others in the employ of the Company have received an advance in wages of about 15 per cent.” (*Carbondale Advance*, April 4, 1863, p. 2)

Twenty thousand tons of coal dumped at Waymart:

“The Delaware and Hudson Canal is now in full operation. They have 210,245 tons of coal piled here [Honesdale] and about 20,000 tons at Waymart. It is the intention of the Company to do a largely increased business the coming season.—*Honesdale Republic.*” (*Carbondale Advance*, April 30, 1864, p. 2)

4514

Ten-Mile Level

Track descended 6 inches in 60 feet or 43 ½ feet per mile, making it possible for the cars to go all the way to Honesdale by gravity:

“From the foot of plane No. 7 to Honesdale, a distance of ten miles, very important additions and improvements were made. The road here, as originally built, was a single-track structure with turnouts, divided into two sections. The first, from plane No. 7 to plane No. 8, six miles in length, had a descending grade for the loaded cars of forty-four feet per mile, enough to enable the force of gravity to move the cars the entire distance; return cars being drawn back by horses, each horse drawing four cars. At No. 8 was another descending plane from the foot of which to Honesdale, a distance of four miles, there was a descending grade in favor of loads of twenty-six feet to the mile. On this section horses were required in both direction, each horse drawing five cars. It was impracticable, with this construction, to handle over these sections an annual traffic exceeding two hundred thousand tons. Materially to increase their capacity required double-tracking and Mr. Archbald undertook and executed this improvement. / Upon the same sections he made changes in motive power so ingenious as to demand examination. Commencing at the foot of No. 7 he utilized six miles, as originally constructed, extending to No. 8. From that point the track was relaid on the same grade, forty-four feet to the mile, all the way to Honesdale, thereby establishing a uniform descent over the entire ten miles on which the loaded cars would move by the force of gravity alone.” *COP*, p. 135-36:

James Archbald Describes the Ten-Mile Level:

In this 1847 report to President John Wurts, James Archbald states: “To understand the way in which our work is now done on this part of the road, we must go back to the foot of No. 7, from which point we occupy for our loaded track six miles of the first road, extending to No. 8; but instead of descending that plane, (as in the old arrangement) our new road continues at the same grade (viz. forty-four feet per mile), all the way to Honesdale, thus making a uniform descent for ten miles sufficient to enable the loaded cars to run by their own gravity the whole of the distance without stopping. For the return of the empty cars from Honesdale back to No. 7, we have constructed another track, entirely different in its location from that used by the loaded cars, and employ stationary engines to draw up the cars to such elevations as enable them also to run by gravity from one engine to the other.”

4515

Light track Honesdale to Waymart: Planes Nos. 13-17

(1829-1845: 6-mile and 4-mile levels for loaded and light cars; 1845-1899: 10-mile level for loaded cars, Planes No. 13-17 for light cars)

--the levels on these planes descended 6 inches in 54 feet.

Over the years, there were lots of changes to the motive power on these planes. When they were opened in 1843, four of them had stationary steam engines at the heads of the planes and one of them (No. 14) had a water wheel. In 1846, three had steam and two had waterwheels. In 1847, two had steam and three had water. In 1848, one had steam and four had water wheels. In 1868,

all five had stationary steam engines. The general movement: stationary steam engines to water wheels to stationary steam engines. When these planes opened, it was James Archbald's intention that they all be powered by water wheels (only No. 14 was), but water rights were either too expensive (Plane No. 13) or could not be obtained (Nos. 15, 16, 17). The 1895 Gravity Railroad map volume shows the water wheels on Planes 14, 15, 16, and 17, as well as the stationary steam engines by which they were replaced (no water wheels after 1868 on the D&H). But it is important to keep in mind as one looks at the 1895 Gravity Railroad map volume that the water wheels shown on these four planes (14-17) were preceded by stationary steam engines, which are not shown on the maps. The stationary steam engines shown on the maps are the ones that were installed after the water wheels were removed.

Summary Description of New Light Track by James Archbald:

In his letter of February 1847 to President John Wurts, James Archbald said the following about the engines on the light track from Honesdale to Waymart: "On account of the hilly nature of the country, five engines were required for the ten miles, four of which were originally steam engines, and one a water-wheel. In making locations for these engines, we kept in view the economy of water in comparison with steam-power for this kind of work, and were so fortunate as to find situations for all of them, (except the one at Honesdale), where water could be used whenever the owners of it would sell at prices which it might be expedient for the company to pay. Last year [1846] we accordingly made a purchase which gave us the control of water for one of these engines, No. 5 [No. 17], and changed it for a water-wheel. This year [1847] we have been able to purchase land, giving the control of water the other two engines, one of which we shall change this winter, and the other the winter following, when four of the five engines will use water to do their work."

Summary Description of New Light Track from *Century of Progress*:

"For returning the empty cars, from Honesdale to No. 7, he [James Archbald] constructed a new track upon a different location, and on this employed stationary engines to draw up the cars to elevations from which they would move by gravity to the point at which they could be moved by the next engine in the series. On account of the rugged country, five of these stationary engines were installed to operate the ten miles of new track. At first, four of these engines were driven by steam and one by water. By 1847, however, two of them were operated by water power [water-powered hoisting engines], which was found to be cheaper. During 1847, Mr. Archbald intended to change one of the remaining three to water power, and he planned to change another to water power early in 1848." [water wheels are shown on Planes 14, 15, 16, and 17 on the 1895 map] *COP*, p. 135-36.

When were the waterwheels removed on these planes?

Dr. Steers says it was in 1863.

Dr. Steers says (p. 163) the following of the water wheels on the D&H:

“Water wheels on the Delaware and Hudson Canal Co. railroad with one exception were known as Rose wheels. They were 20’ in diameter by 20’ wide and undershot in function. The wheel at No. 17 [originally called No. 5] differed only in that it was 30’ in diameter. All the water wheels were replaced by steam power in 1863.” (“The Delaware & Hudson Canal Company’s Gravity Railroad,” *Proceedings of the Canal History and Technology Symposium*, Volume II, March 26, 1983, pp. 129-203).

Whiting in the Cassier article says that steam was substituted for water power at the planes with water wheels "about 1856":

“... in 1856 the present planes and ‘levels,’ from the foot of No. 1 to the head of No. 10, were commenced. This arrangement employed eight planes up the mountain from Carbondale to the summit, and all of the planes were renumbered as they are at present. / About this time, too, steam was substituted for water power at the planes using water wheels. . .”

Dr. Steers and Whiting are both wrong. The end point for water wheels on all Gravity planes was 1868.

Water wheels not used on the D&H after 1868:

“The Del. & Hud. Canal Co. have just put a stationary steam engine in at Plane No. 14, on their railroad, in place of the old water power. The engine was built at the Dickson Works, Scranton, and has been placed in charge of Silas Hoyle as Head Engineer and Walter Bryant, Assistant. The company now work the cars on all their planes by steam power.—*Herald*” (*Carbondale Advance*, Saturday, February 8, 1868, p. 3.)

Summary Statement

Water wheels and stationary steam engines on planes Planes 13-17:

1845: four of the planes (Nos. 13, 15, 16, 17) had steam engines and one a water wheel (No.14): James Archbald's original plan was to have the engines on all five of these planes operated by water wheels, but water rights were either too expensive (Plane No. 13) or could not be obtained (Nos. 15, 16, 17).

1846: water wheel installed on Plane No. 17, which meant that three had steam (Nos.13, 15, and 16) and 2 water (Nos. 14 and 17)

1847: one more to water power (No. 15 or No 16): now three by water and two by steam

1848: one more to water power (No. 15 or No. 16): now four by water and one (No. 13) by steam

1868: the water wheel on No. 14 replaced with a steam engine: now all five had steam

What is Dr. Steers' source for the statement that the D&H waterwheels, with one exception, were known as Rose wheels? I can find no description anywhere of a Rose water wheel.

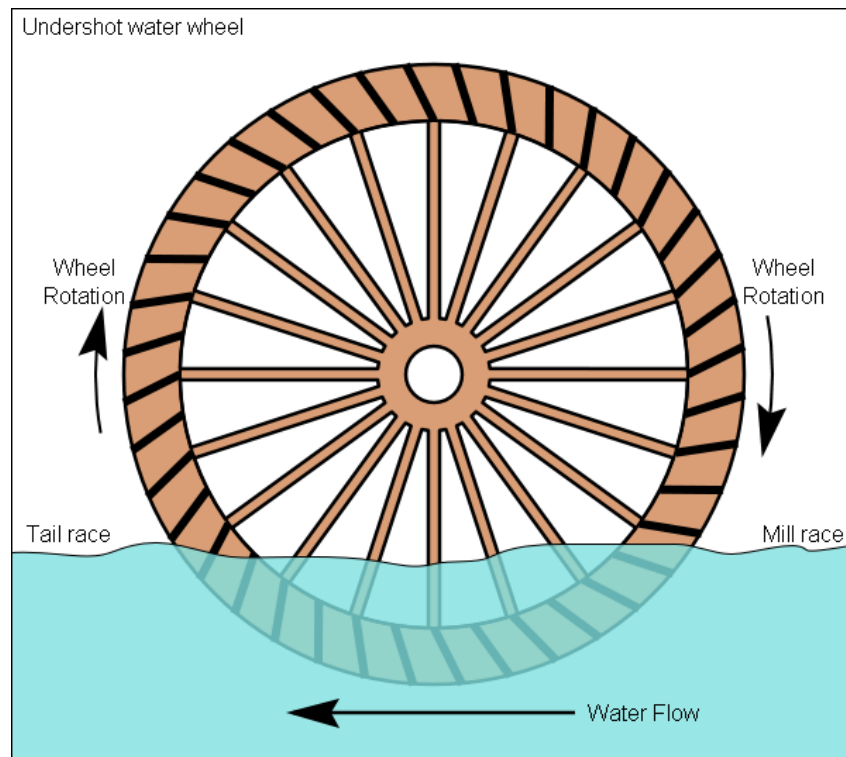
From Wikipedia:

Headrace, Tailrace:

A mill pond is formed when a flowing stream is dammed to feed a water wheel. A channel for the water flowing to or from a water wheel is called a mill race (also spelled millrace) or simply a "race" (in Scotland it is normally referred to as a lade), and is customarily divided into sections. The race bringing water from the mill pond to the water wheel is a headrace; the one carrying water after it has left the wheel is commonly referred to as a tailrace.

Undershot Wheel:

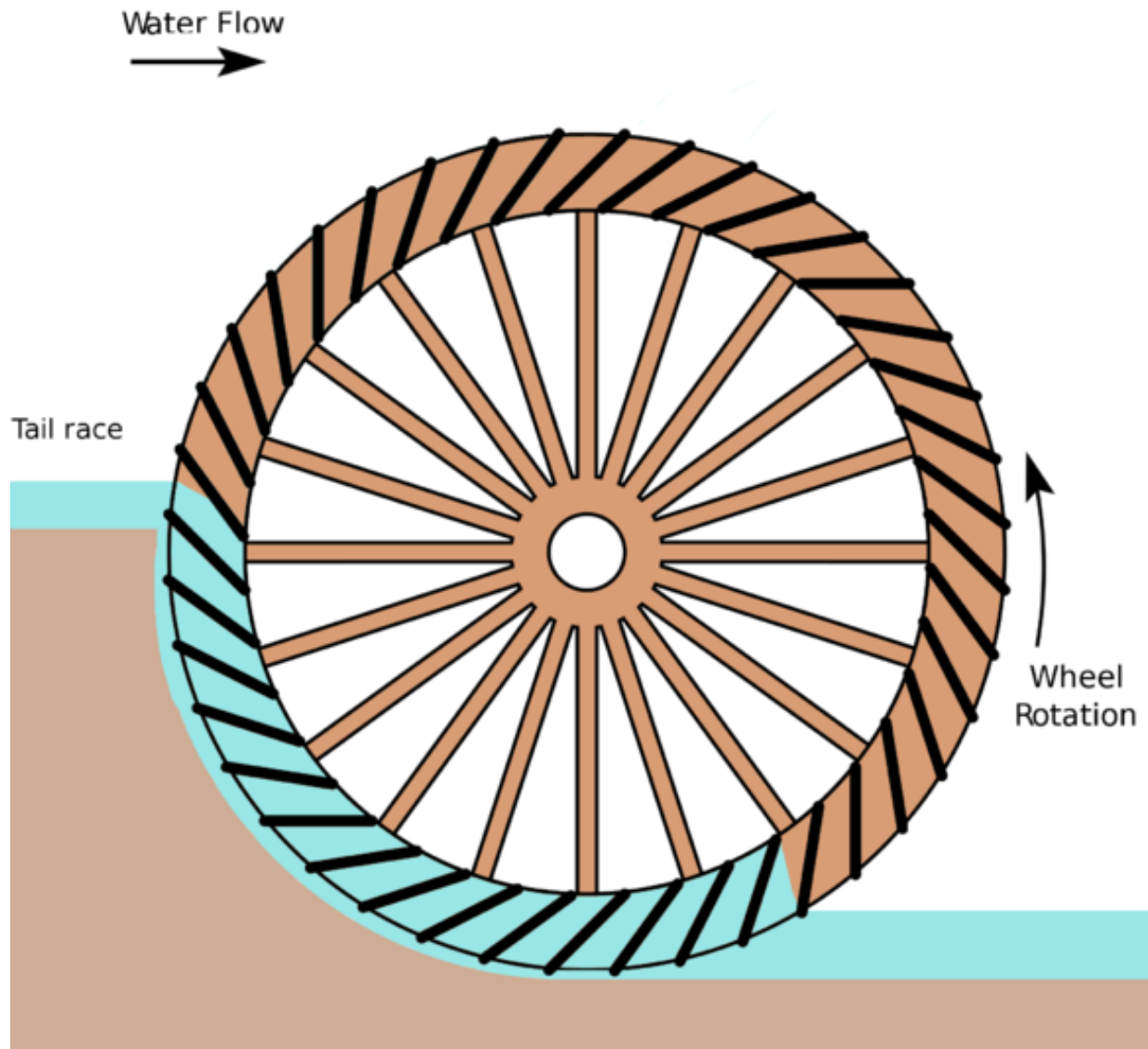
An undershot wheel (also called a stream wheel) is a vertically mounted water wheel that is rotated by water striking paddles or blades at the bottom of the wheel. The name undershot comes from this striking at the bottom of the wheel. This type of water wheel is the oldest type of wheel. Undershot wheels gain no advantage from head. They are most suited to shallow streams in flat country. [emphasis added]



Breastshot wheel:

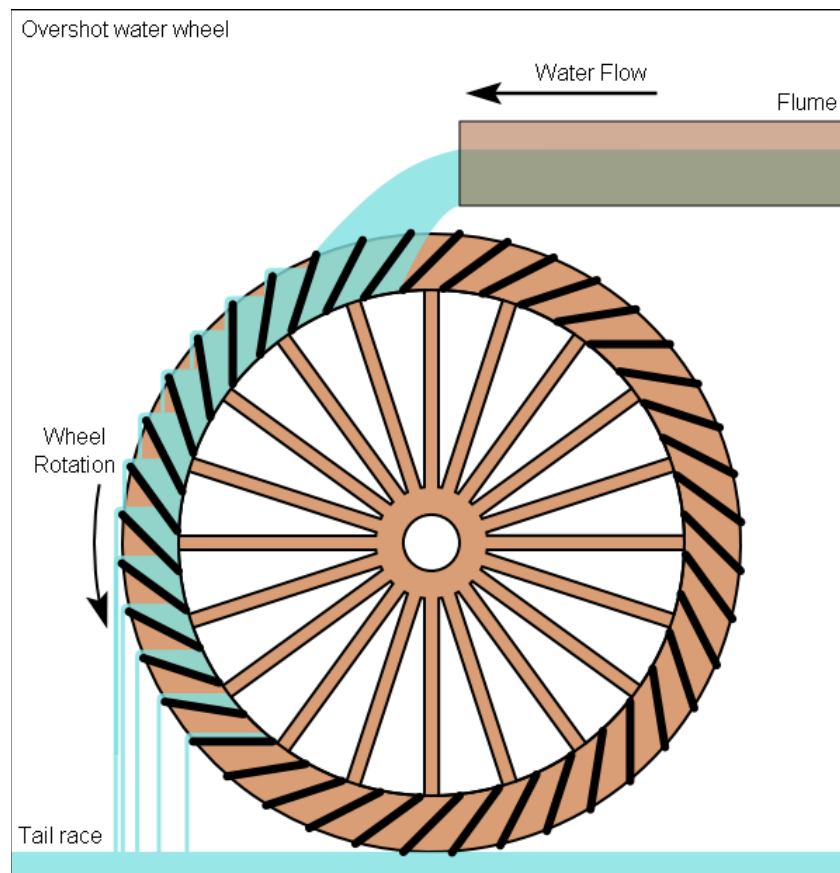
A vertically mounted water wheel that is rotated by falling water striking buckets near the center of the wheel's edge, or just above it, is said to be breastshot. Breastshot wheels are the most common type in the United States of America and are said to have powered the American industrial revolution. [Emphasis added] Breastshot wheels are less efficient than overshot wheels, more efficient than undershot wheels, and are not backshot.

Breastshot water wheel



Overshot Waterwheel:

A vertically mounted water wheel that is rotated by falling water striking paddles, blades or buckets near the top of the wheel is said to be overshoot. In true overshoot wheels the water passes over the top of the wheel, but the term is sometimes applied to backshot or pitchback wheels where the water goes down behind the water wheel. A typical overshoot wheel has the water channeled to the wheel at the top and slightly beyond the axle. The water collects in the buckets on that side of the wheel, making it heavier than the other "empty" side. The weight turns the wheel, and the water flows out into the tail-water when the wheel rotates enough to invert the buckets. The overshoot design can use all of the water flow for power (unless there is a leak) and does not require rapid flow. Unlike undershot wheels, overshoot wheels gain a double advantage from gravity. Not only is the momentum of the flowing water partially transferred to the wheel, the weight of the water descending in the wheel's buckets also imparts additional energy. The mechanical power derived from an overshoot wheel is determined by the wheel's physical size and the available head, so they are ideally suited to hilly or mountainous country. On average, the undershot wheel uses 22 percent of the energy in the flow of water, while an overshoot wheel uses 63 percent, as calculated by English civil engineer John Smeaton in the 18th century. Overshoot wheels demand exact engineering and significant head, which usually means significant investment in constructing a dam, millpond and waterways. Sometimes the final approach of the water to the wheel is along a lengthy flume or penstock.



The *McGraw Hill-Miners' Handbook* (p. 777-78) contains a very interesting discussion of water power in the section titled *Hydraulics*. Therein, we read:

“Theoretical Efficiency of Water-Power. –The gross power of a fall of water is the product of the weight of water discharged in a unit of time, and the total head or difference in elevation of the surface of the water, above and below the fall. The term head, used in connection with waterwheels, is the difference in height between the surface of water in the penstock and that in the tailrace, when the wheel is running.”

A mathematical formula for calculating the horsepower of a fall is then presented, followed by the following statement: “The total power can never be utilized by any form of motor, because there is a loss of head, both at the entrance to, and exit from the wheel, and there are also losses of energy due to friction of the water in passing through the wheel. The ratio of the power developed by the wheel to the gross power of the fall is the efficiency of the wheel. A head of water can be made use of in any one of the following ways: (1) By its weight, as in the water balance, or overshot wheel. (2) By its pressure, as in the hydraulic engine, hydraulic presses, cranes, etc., or in a turbine water wheel. (3) By its impulse, as in the undershot and impulse wheels, such as Peltons, etc. (4) By a combination of these.”

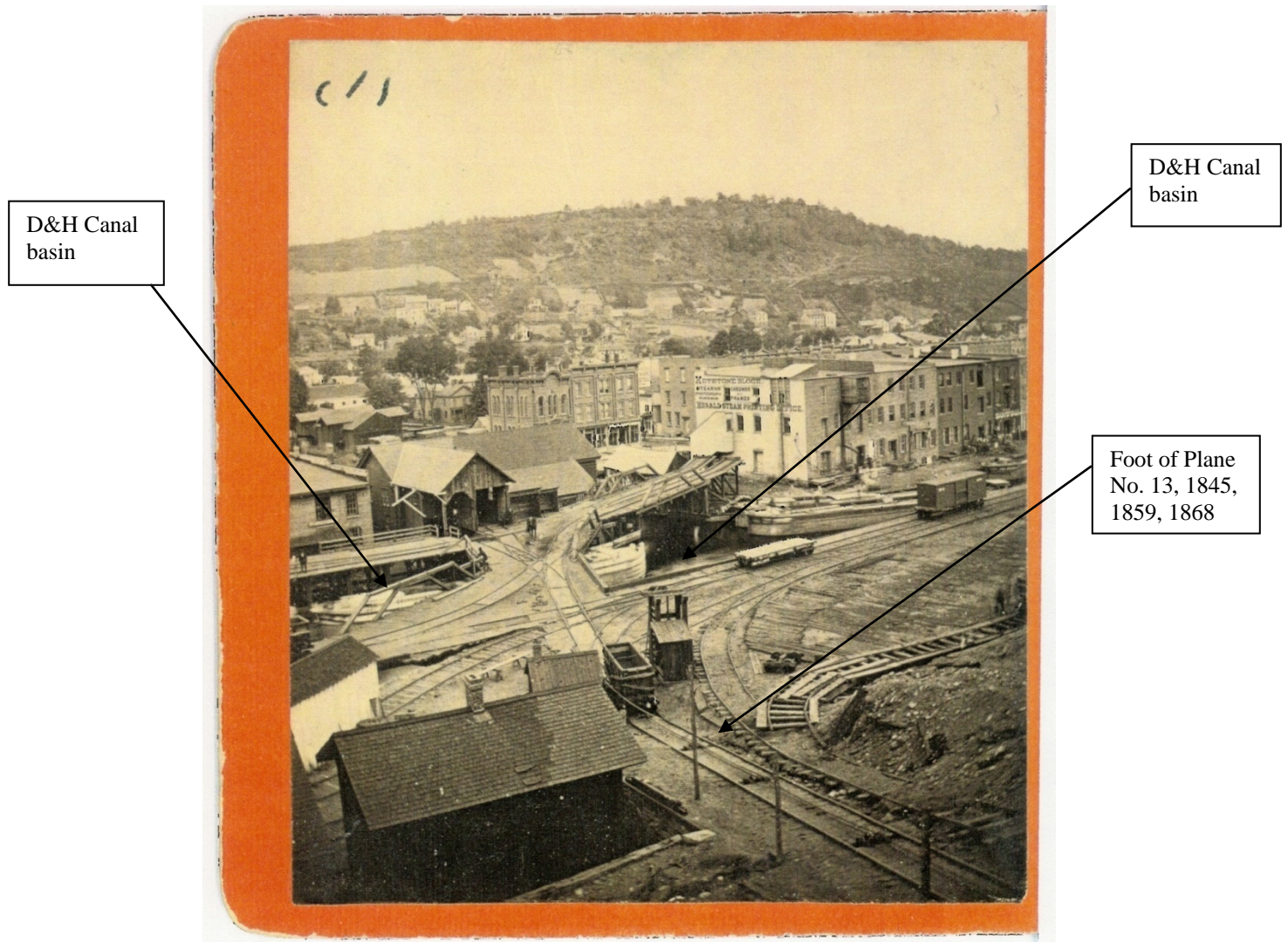
This is followed by a mathematical formula for calculating the horsepower of a running stream.

The presentation continues with a discussion of four types of wheels—breast or undershot, overshot, impulse, and reaction—for using the power of waterfall. Here is the material on the two most commonly used types of wheels, undershot and overshot:

“Utilizing Power of Waterfall.—The power of a waterfall may be utilized by a number of different styles of motors, but each has certain advantages. / When the head is low (not over 5 or 6 ft.) *breast or undershot wheels* are frequently employed. If these are properly proportioned, it is possible to realize from 25% to 50% of the theoretical power of the fall, but the wheels are large and cumbersome compared with the duty they perform, and are not often installed at present [1916], especially near manufacturing centers. / For falls up to 40 or 50 ft., *overshot wheels* are very commonly employed, and they have been used for even greater heads than this. The overshot wheel derives its power both from the impulse of the water entering the buckets, and from the weight of the water as it descends on one side of the wheel in the buckets; the latter factor is by far the more important of the two. When properly proportioned, overshot wheels may realize from 70% to 90% of the power of the waterfall, but they are large and cumbersome compared with the power that they give, and are not often installed except in isolated regions, where they are made from timber by local mechanics.”

No photographs are known to exist of any portion of the 1845 configuration of the Gravity Railroad. Later in the nineteenth century, many photographs were taken. We will use some later photographs to illustrate this material.

Hensel stereocard No. 921: *Terminus of D. & H. RR., and D. & H. Canal*. The new light track went up the hill, Plane No. 13, on the track shown in the lower right corner of this photograph.



Plane No. 13

--steepest one on the line, 1 foot in 5

--985 feet long (rise 194.50 feet)

--powered by a stationary steam engine at the head of the plane

--Level 13: 14,238 feet long (fall 126.18 feet)

--there was never a waterwheel on Plane No. 13. Planes 14-17 all had, at various times, in the period 1843-1868, either a water wheel or a stationary steam engine as the power source. By 1868, they were all steam powered (No. 14 was the last to have water power; No. 17 had two waterwheels)

1845: four of the planes (Nos. 13, 15, 16, 17) had steam engines and one a water wheel (No.14): James Archbald's original plan was to have the engines on all five of these planes operated by water wheels, but water rights were either too expensive (Plane No. 13) or could not be obtained (Nos. 15, 16, 17).

1846: water wheel installed on Plane No. 17, which meant that three had steam (Nos.13, 15, and 16) and 2 water (Nos. 14 and 17)

1847: one more to water power (No. 15 or No 16): now three by water and two by steam

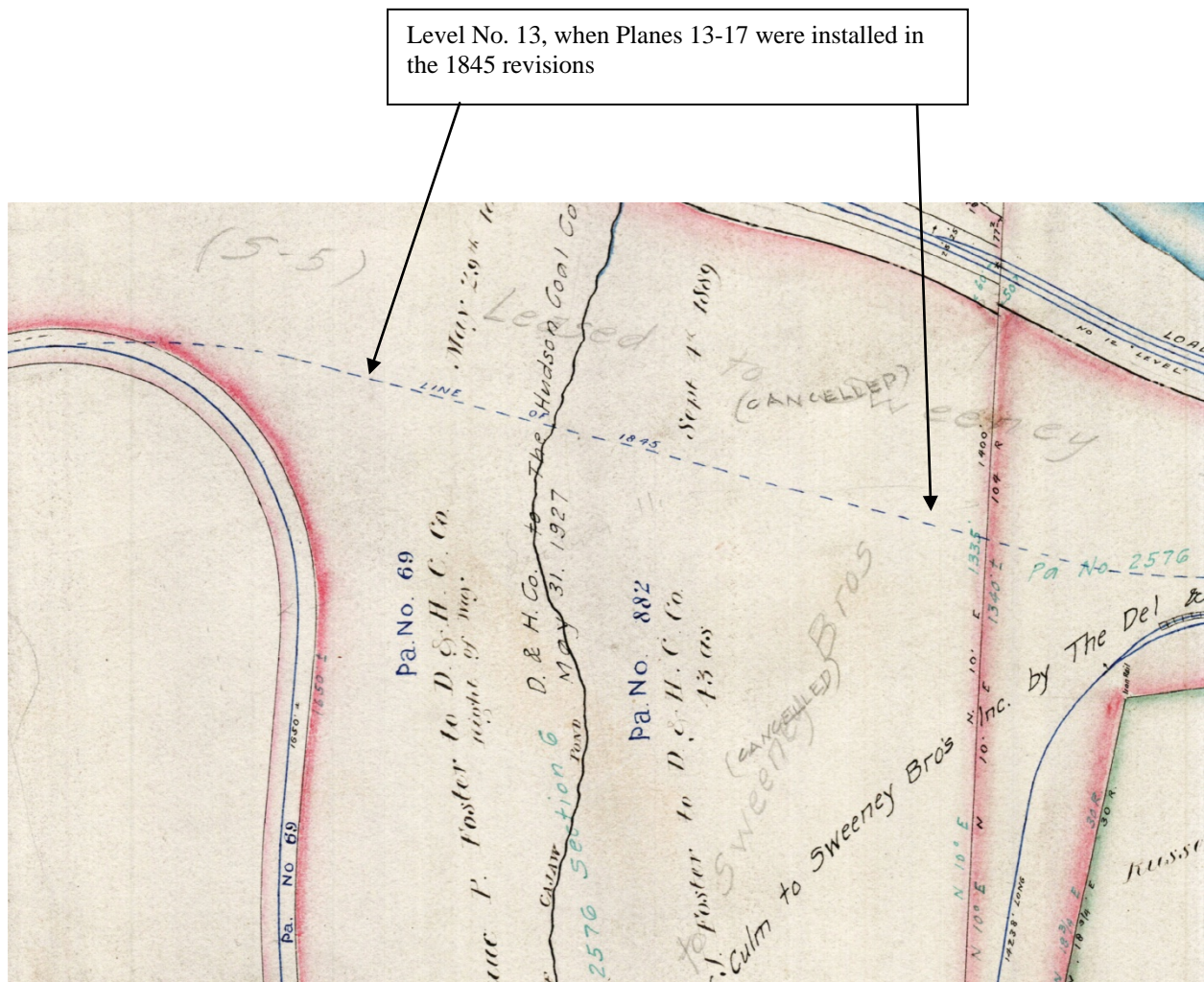
1848: one more to water power (No. 15 or No. 16): now four by water and one (No. 13) by steam

1868: the water wheel on No. 14 replaced with a steam engine: now all five had steam

Original Level No. 13:

Plane No. 13, with its Level, were installed in the 1845 revisions to the roadbed. As originally configured, the level on Plane No. 13 (also known as No. 1 from the Honesdale perspective) had high trestling on it. This we know from Torrey/Archbald, from whom we learn that in 1848 that the high trestling on Level No. 13 was taken out. "In 1848 there were indications that the high trestling on 'Level #1' would not long remain safe for use, and it was decided to construct a new track up the valley of the Cadjaw Pond Brook and around the 'Horseshoe' Bend, so as to relieve the necessity of maintaining the high trestling. This new track increased No. 1 Level by 2436 ft. in length, and although Plane No. 1 had 85 ft. added to its length and 15 ft. to its altitude, the grade of this new level was reduced to 47 ft. per mile. After the construction of this track around the Horseshoe, the high trestle was taken down. The use of water power to work these planes [on the light track back to Waymart] did not prove satisfactory and after a few years, stationary steam engines were erected to take the place of such water power."

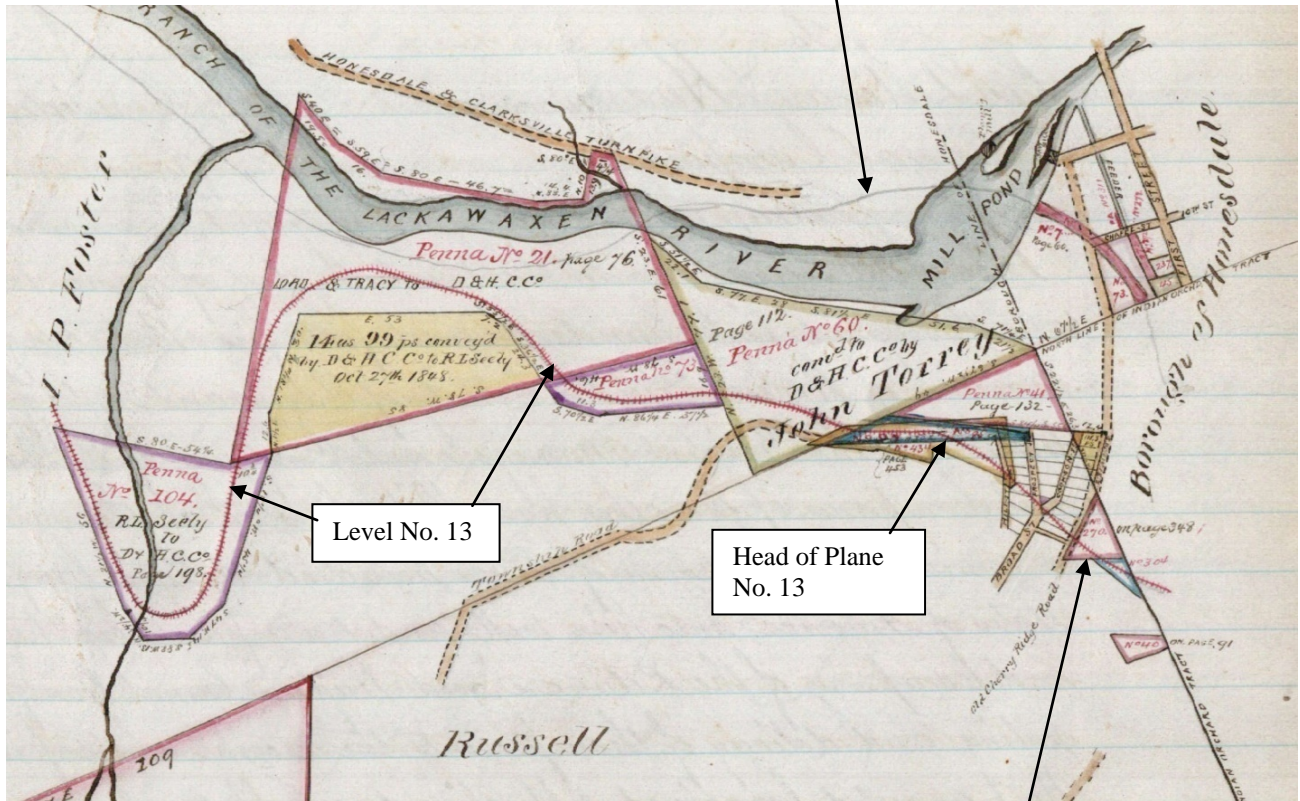
Level No. 13, when established in the 1843-1845 revision, headed west from the engine house, crossing what would later be known as the horseshoe curve. This we can see on the detail given below from the 1895 Gravity Railroad map volume:



The position of Level 13 was later changed to go around the horseshoe curve.

All of Plane No. 13 and the beginning of Level 13, including the portion around the Horseshoe Curve, are shown on the map that illustrates the deed, dated May 25, 1845, between John Sayre and others and The Delaware and Hudson Canal Company. This deed is given on pages 93-94 of the D&H Deeds PA; the map is on page 95:

Loaded track (Level 12)
as it enters Honesdale,
1845, 1859, 1868

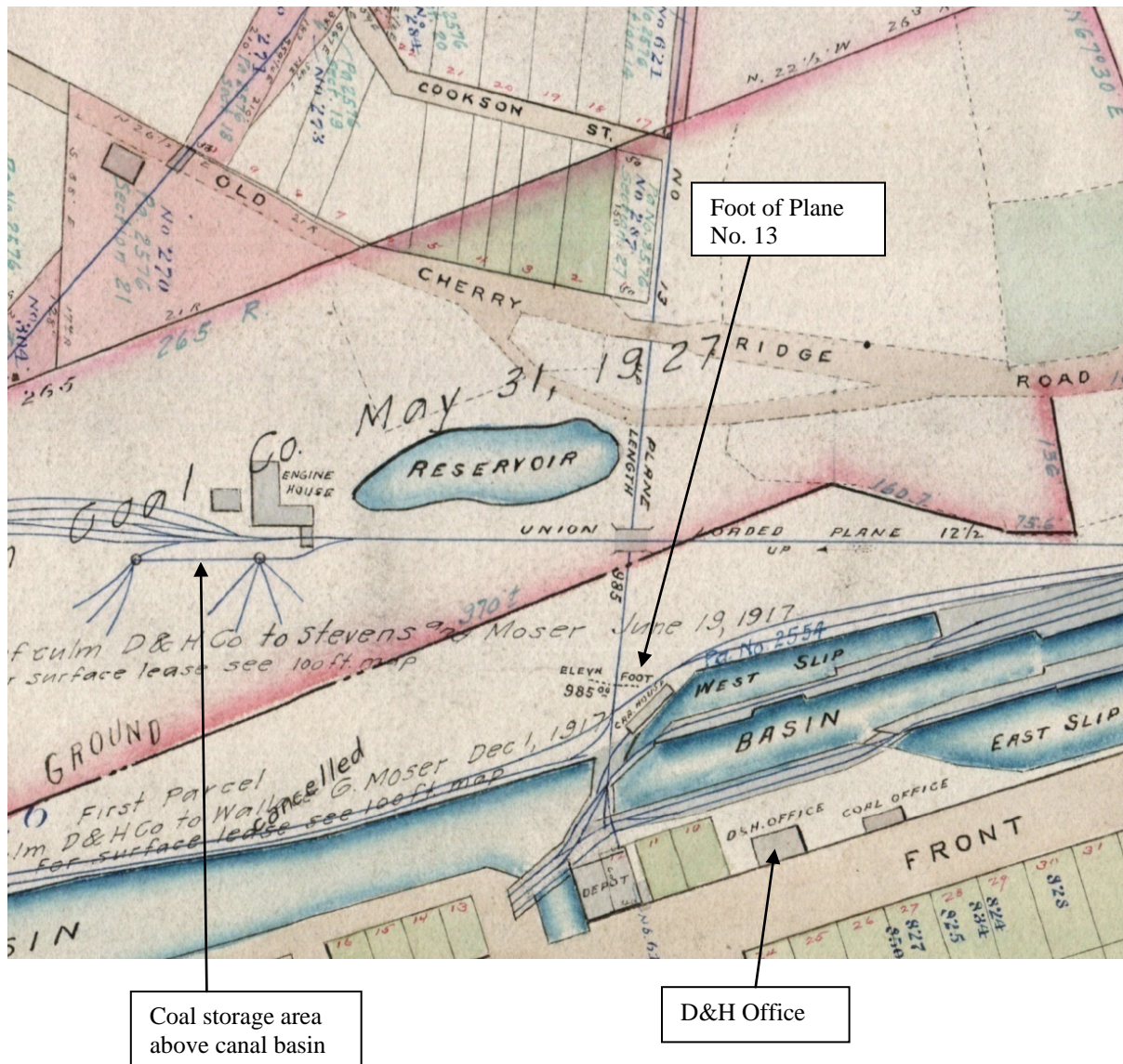


Level No. 13

Head of Plane
No. 13

Plane No. 13, 1845,
1859, 1868

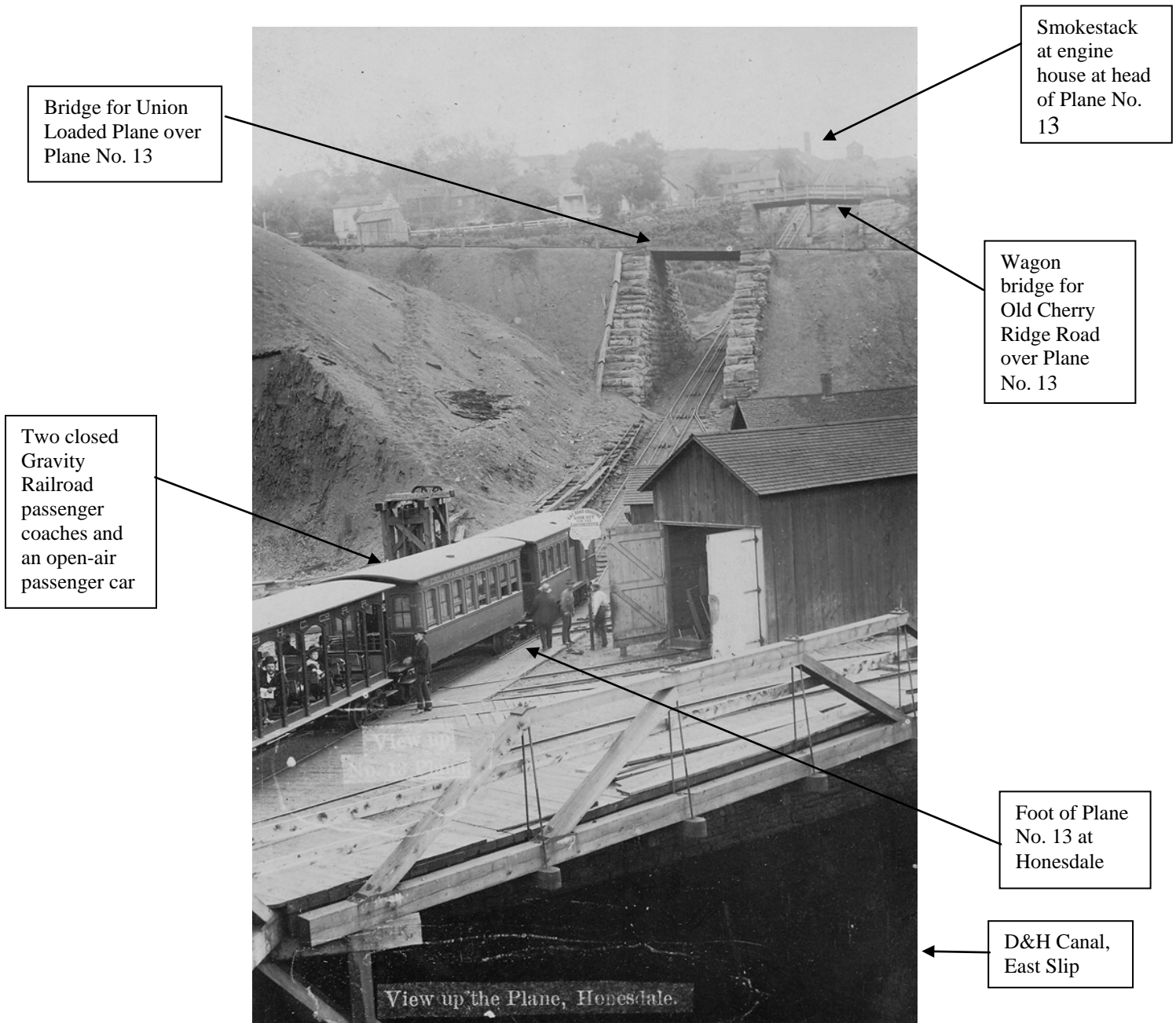
The foot of Plane No. 13, at the Canal basin, and a good section of the plane, are shown in this detail from the 1895 Gravity Railroad map volume:



The foot of Plane No. 13 at the Canal basis in Honesdale was 985 feet above sea level. **“Altitudes Again.** / We are indebted to O. D. Shepherd, Esq. Chief Engineer of the D. & H. C. Co. of this city, for the following elevations, omitting fractions, above tide water, of various points on the Gravity R. R. of the Company: Foot of No. 13 Plane, Honesdale, 985. (*Carbondale Advance*, September 17, 1870, p. 3)

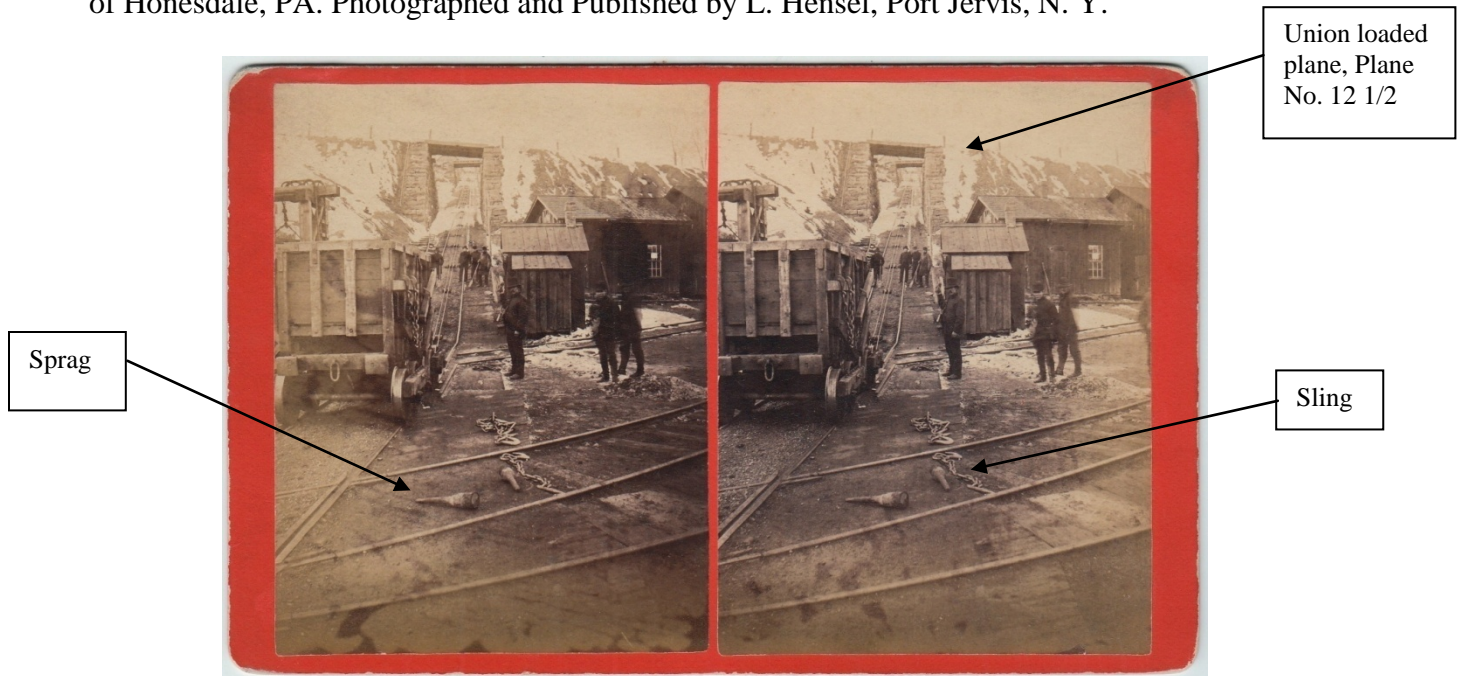
Given here is a view up Plane No. 13 that was taken by Hensel in the 1870s. At the top of the plane can be seen the smokestack at the engine house at the head of Plane No. 13.

*View Up the Plane, Honesdale from Orig. Photo Souvenir of Del. & Hud. Gravity Road.
Published by L. Hensel, Hawley, PA.*

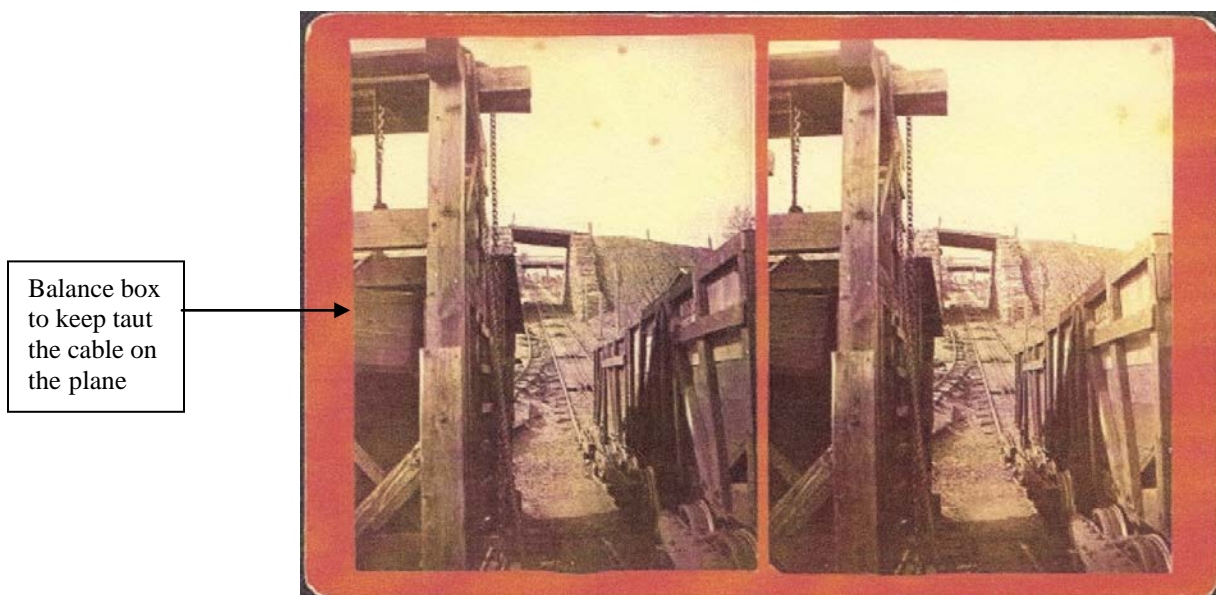


Here is another Hensel view up Plane No. 13 (one of several, apparently, numbered 923). Note the slings and sprags on the ground in the center foreground.

Hensel stereocard No. 923: “*View Up the Plane [No. 13], Honesdale*” from “Stereoscopic Views of Honesdale, PA. Photographed and Published by L. Hensel, Port Jervis, N. Y.”



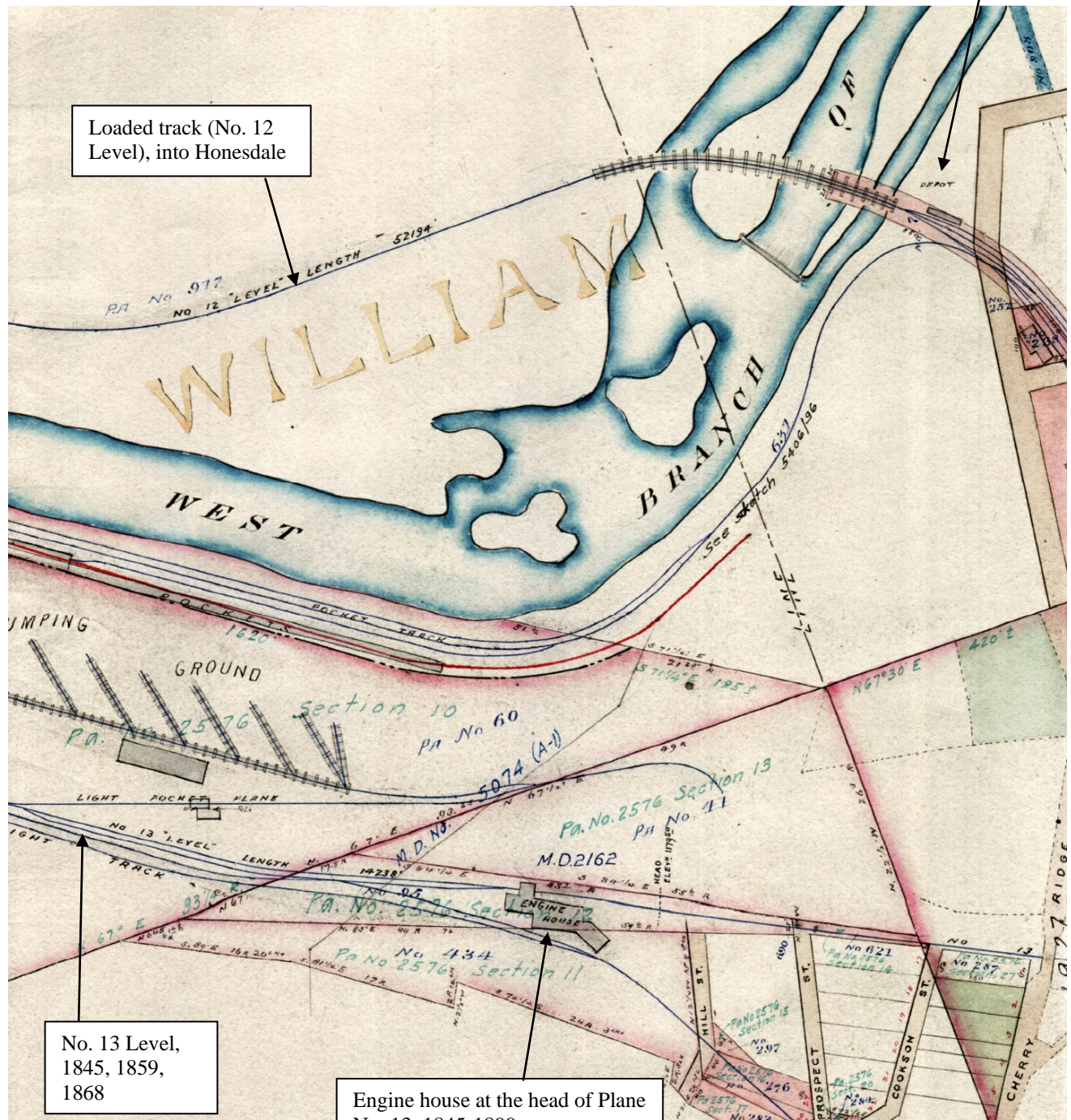
Shown below is another Hensel view up D&H Plane No. 13. This Hensel is in the archives of the Minisink Valley Historical Society, where it is identified as “923 View up the Plane, Honesdale.” It is, nevertheless, certainly Plane No. 13, and certainly a Hensel photograph.



The level between the head of Plane No. 13 and the foot of Plane No. 14 was 14,238 feet long (over 2 ½ miles), with a fall over the length of the level of 126.18 feet. The engine house at the head of Plane No. 13 is seen in this detail from the 1895 Gravity Railroad map volume.

The head of Plane No. 13

Gravity depot on loaded track



No. 13 Level,
1845, 1859,
1868

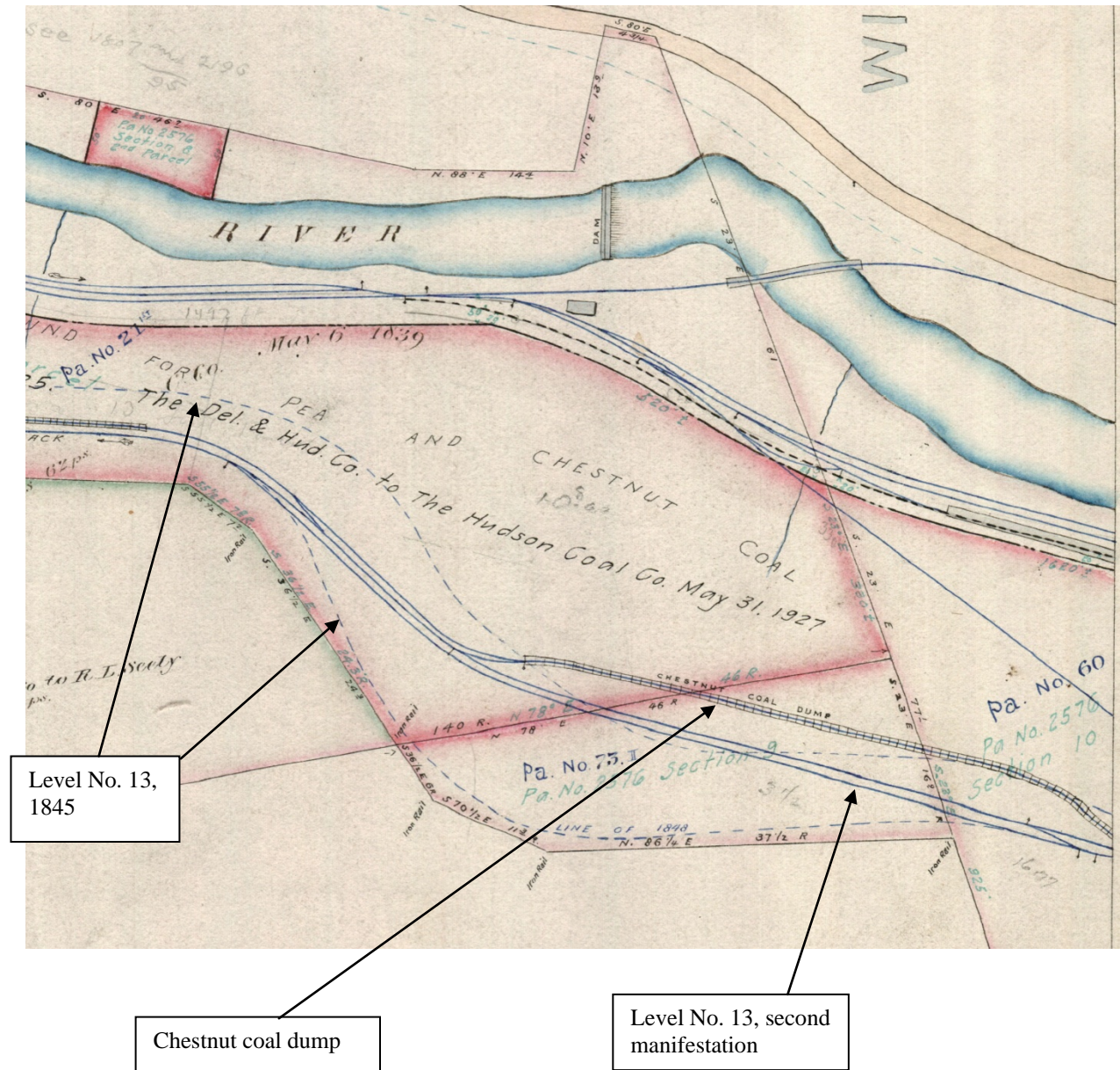
Engine house at the head of Plane
No. 13, 1845-1899

This view from the head of Plane No. 13 is given in the Hensel stereocard shown below. Hensel stereocard No.1100: *Honesdale, seen from the Head of No. 13 Plane*

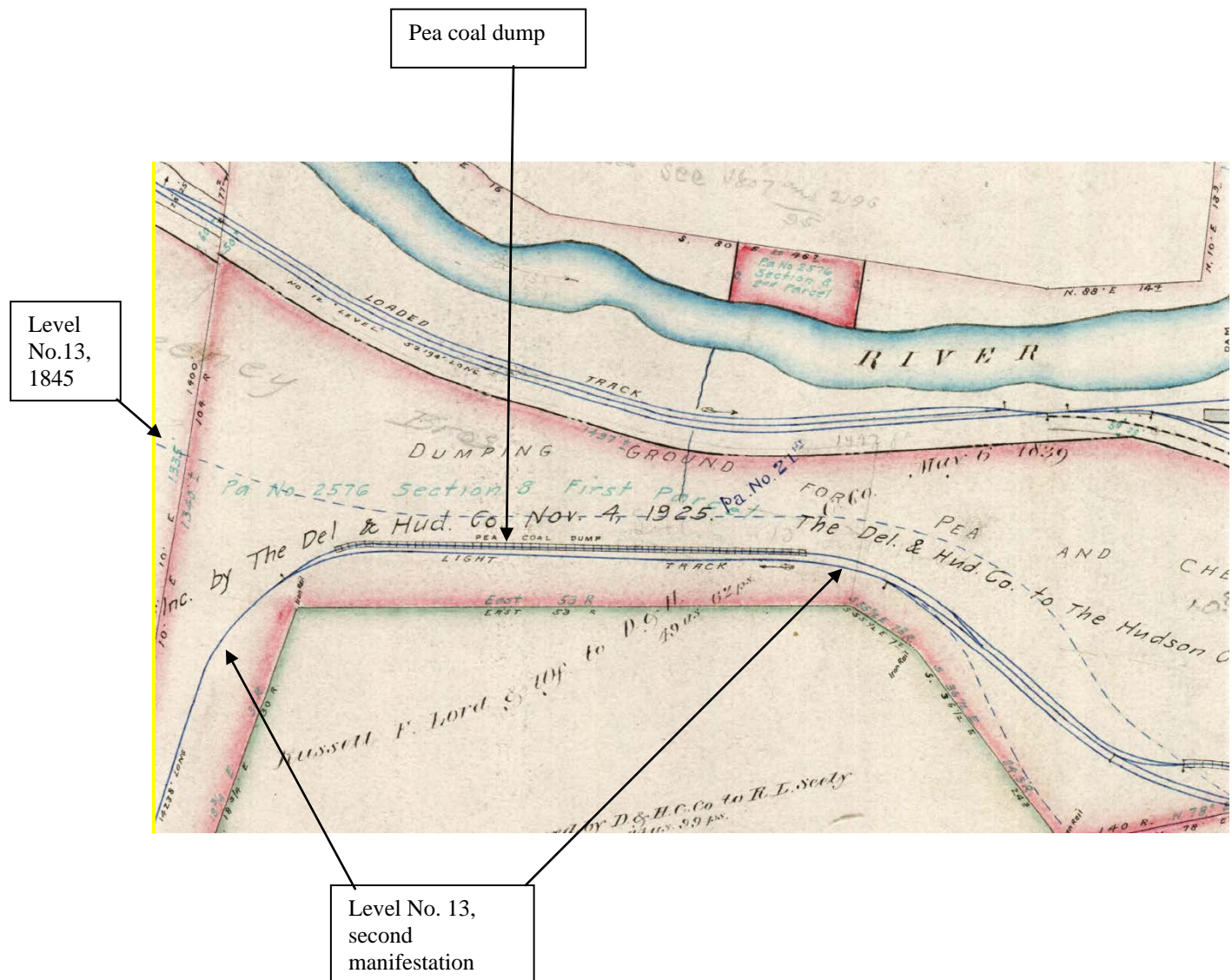


Plane
No. 13,
coming
up the
mountain

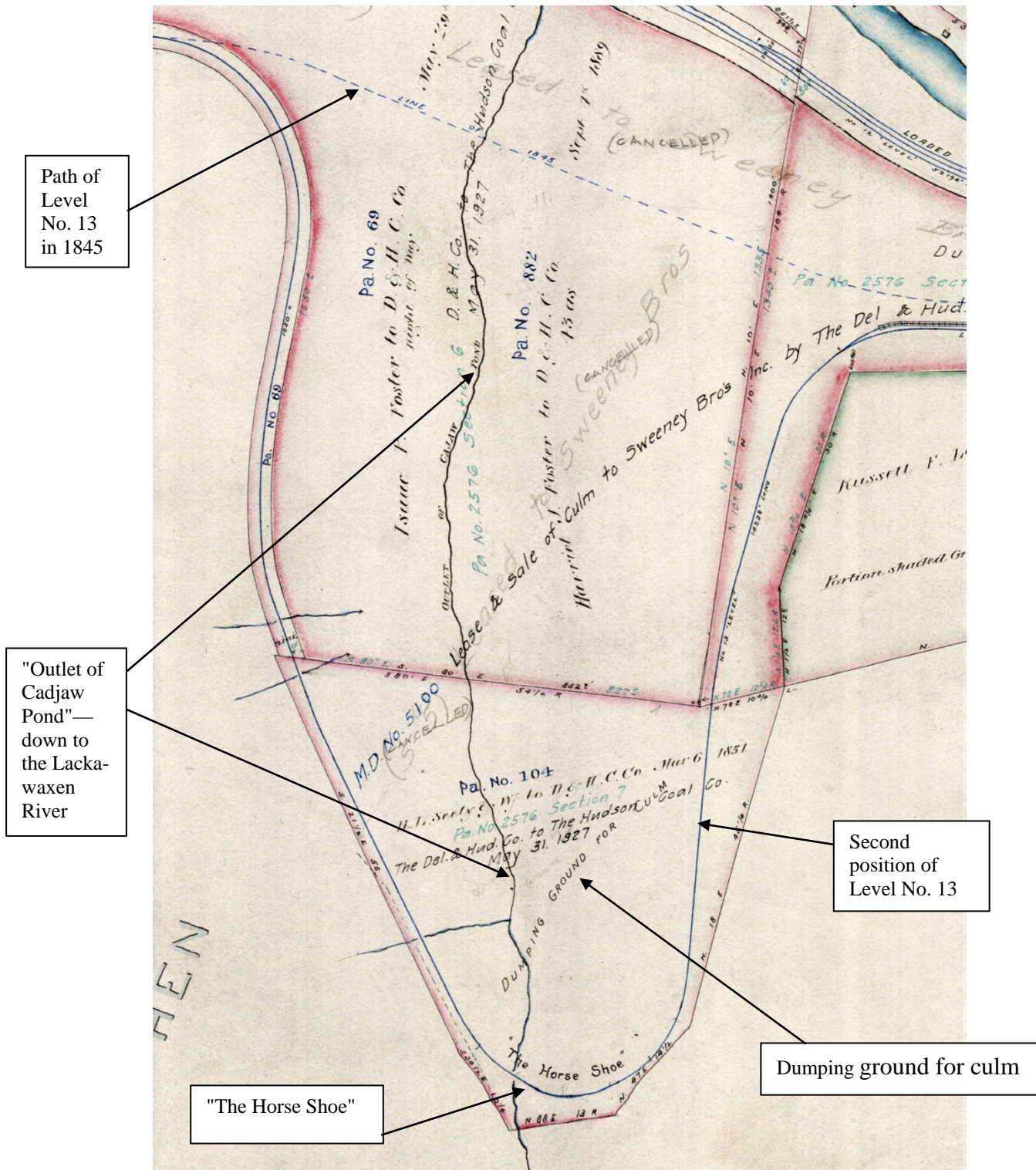
Level No. 13, Heading West. Detail from the Gravity Railroad map volume.



Farther West. Detail from the Gravity Railroad map volume.



Around the Horseshoe: Shown below is the portion of the level around “The Horse Shoe,” to the west of Honesdale. Detail from the Gravity Railroad map volume.



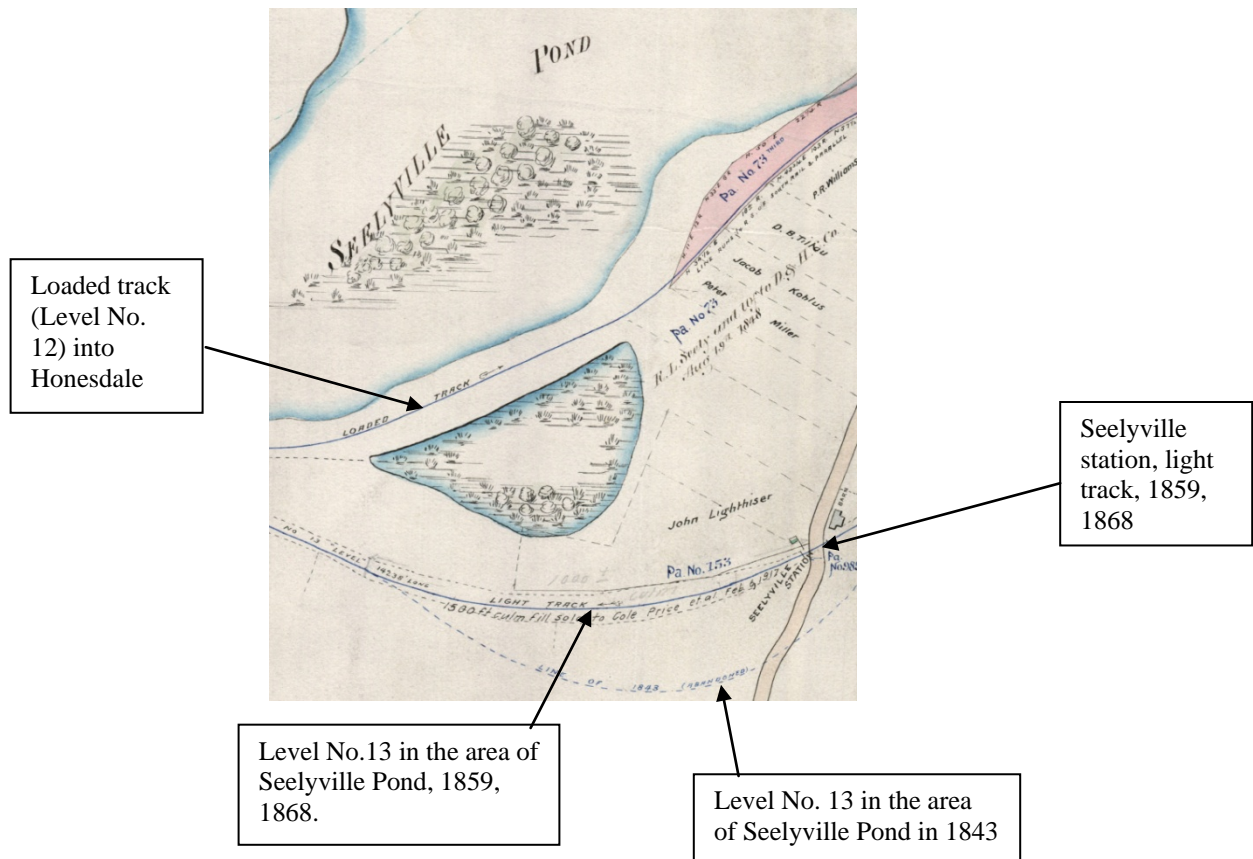
Lots of storage areas on Level No. 13. Were they in place in 1845? Probably not until later on.

Winter Storage in Honesdale:

On the question of winter storage of coal in Honesdale, James Archbald says the following in his February 1847 report to President John Wurts:

“At this place [Honesdale] also we have had to make some important additions to our original work, in order principally to enable us to deposit, during the suspension of canal navigation, the greater part of the coal brought over the railroad, amounting to from eighty to one hundred thousand tons. To this end it was requisite to provide ground to hold such quantity within reasonable extent, together with the engine power and machinery necessary to elevate, so that it can be piled with economy and dispatch, and with the increased facilities called for by our enlarged business to load boats, screen coal, and separate it into various sizes, carry off culm, or refuse dust, etc.”

In the detail from the 1895 Gravity Railroad map given below, the original location of the light track (No. 13 level) in the Seelyville area is shown. It is marked with a dotted blue line on the map: “LINE OF 1843 (ABANDONED)”.



Minor modifications in the location of roadbed of the light track from Honesdale to Waymart were made throughout the 1840s, 1850s, and 1860s, and it is not possible to now determine which changes were made when. The changes, undated, are all indicated in the 1895 Gravity Map volume. Many of these modifications were associated with the motive power changes (steam/water) during those years on Planes 14-17. Other changes were made to improve/facilitate the movement of the light cars through these planes. The basic footprint remained the same from 1843 to 1857 (see note on Plane No. 14 map below). After 1868, when the last of the water wheels on these four planes was replaced with steam power, it is probable that very few, if any, modifications to the roadbed were made. It is especially wonderful that W. E. Anderson was able to indicate these changes (from the 1840s, 1850s, and 1860s) when he drew the 1895 maps.

Accidents, Facts about the Plane, Daily Life (plane and level 13)

Modifications were made in the placement of Level 13 after its initial installation in 1843. Shown immediately above, we see a modification that was made in the area near the Seelyville Pond.

Gill's Latches (and Cellar Hole No. 1) were located on Level 13. Farnum's Latches (and Cellar Hole No. 2) on Level 14: These were not in place in 1845. Were they in place by 1859? I'm not sure that anyone knows when the two sets of latches were installed on the tracks between Honesdale and Waymart. My guess is that they were probably established at the time of the 1859 configuration, when production increased dramatically and when increased storage of coal became necessary in the Honesdale area. We will discuss Gill's Latches and Farnum's Latches in the volume on the 1868 configuration.

4517

Plane No. 14

--629 feet long (rise 102.55 feet)

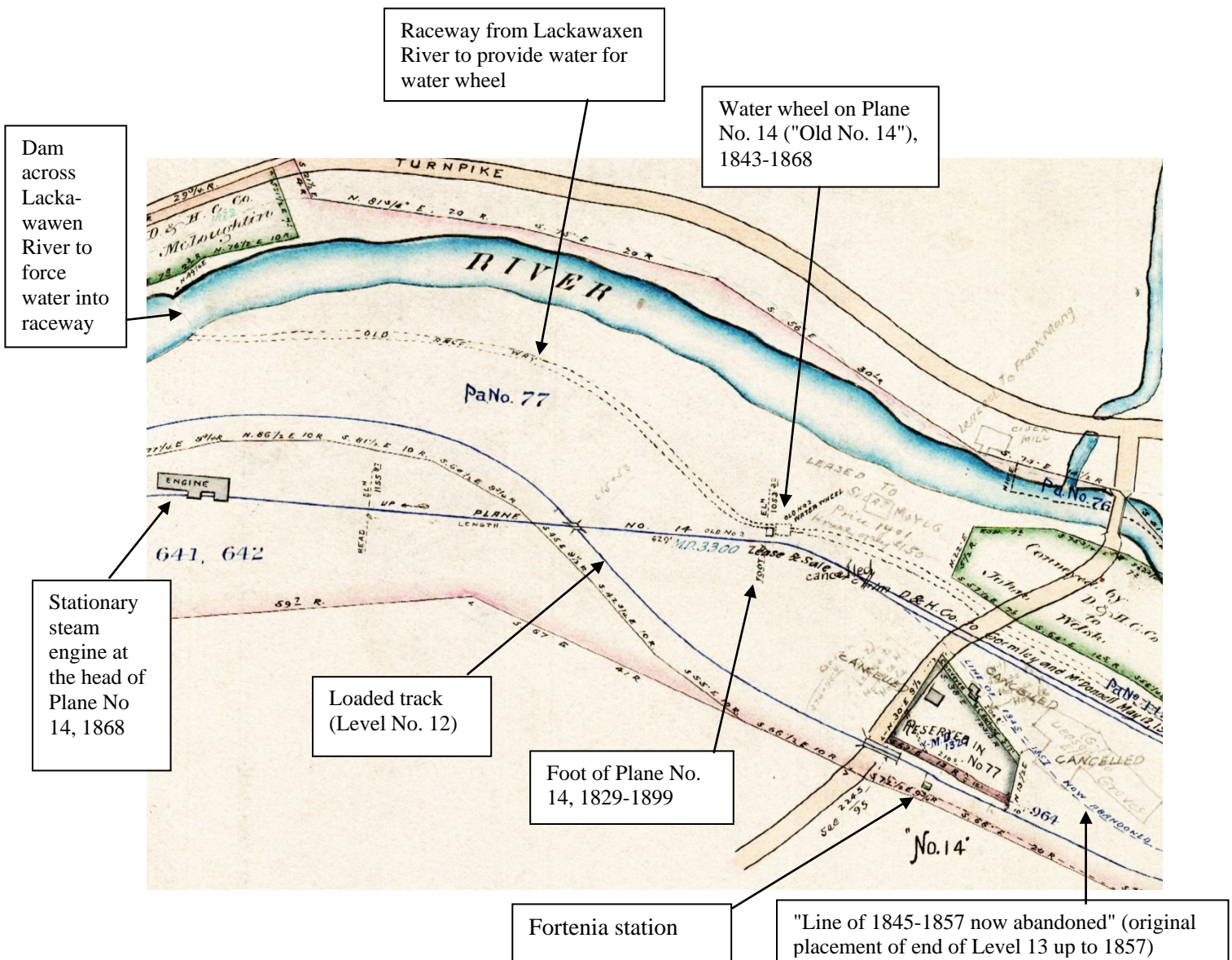
--water wheel there when light track opened in 1843; waterwheel replaced by steam engine in 1868

--Level 14 was 7,879 feet long (fall 66.45 feet)

Runaway cars on Plane No. 14 in 1867:

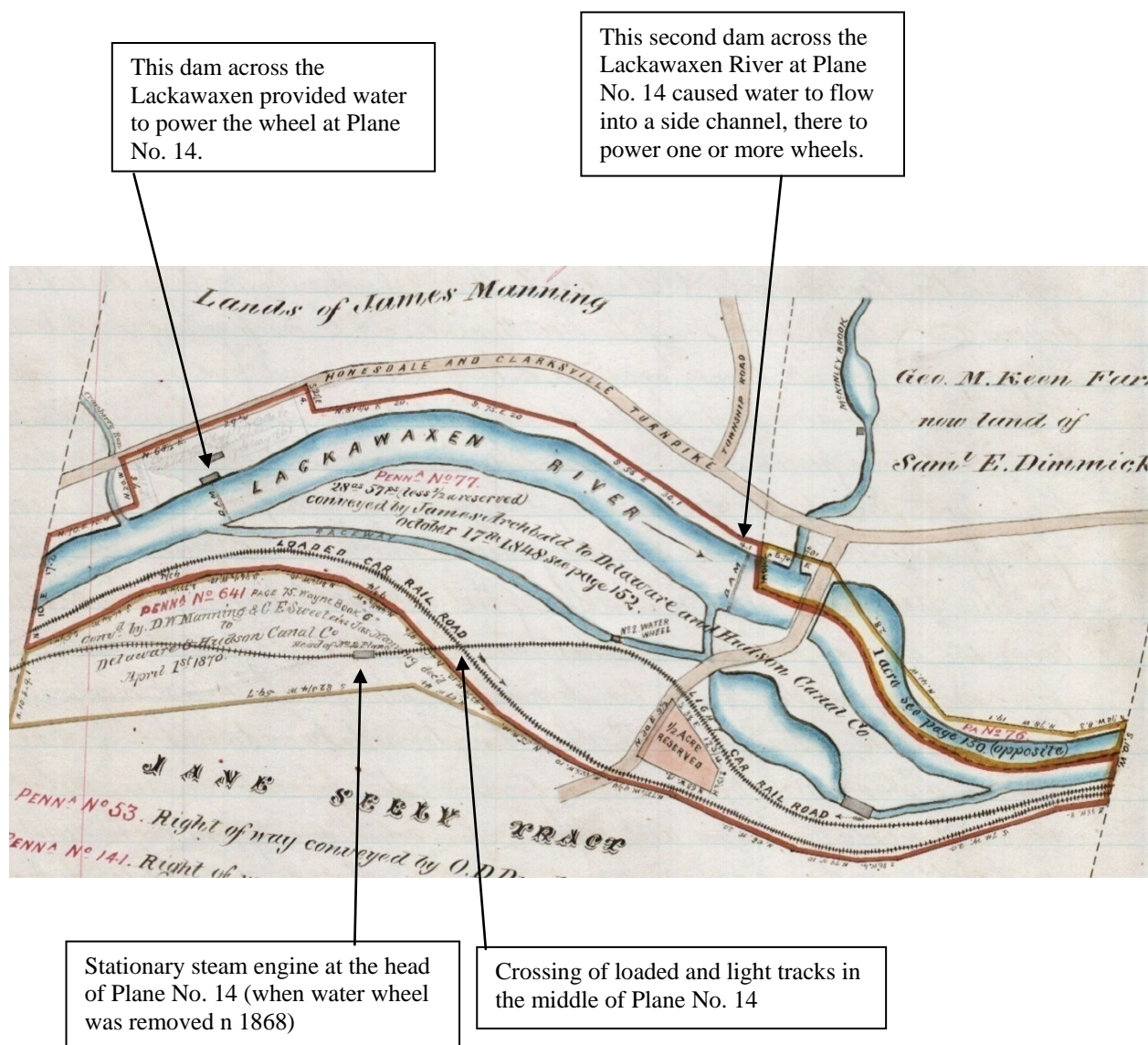
“On Saturday, 22 light cars broke away from the head of the plane, and started on their “own hook” for Waymart. At the foot of plane No. 2 [No. 14], two miles distant, they ran into another train, standing on the track, and twelve cars were made into kindling wood in a short time. . .” (*Carbondale Advance*, Saturday, August 3, 1867, p. 3)

Plane No. 14: Note that in this view from the 1895 Gravity Railroad map volume that the exact location of "Old No. 2 Water Wheel" (water wheel on this plane when installed in 1843 revision and there until 1868) is shown. Also shown is the "Old Race Way" (the race which supplied the water to power the wheel). It is called here "Old No. 2," i. e., the second plane out of Honesdale, i. e., Plane No. 14.



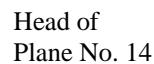
In the late 1850s, a thorough overhaul of the system took place, on both sides of the Moosic Mountain. At that time, the revised configuration of the light track from Honesdale to Waymart very probably became the light track that served from then until the closing of the system at the end of the 19th century. That revised configuration is what is shown in the 1895 Gravity Railroad map volume.

A second view of the Plane 14 area is given on the map on page 151 in the D&H Deeds PA, pp. 150-151, that illustrates the deed, dated October 17, 1848, between James Archbald and wife and The Delaware and Hudson Canal Company. Here is that map:



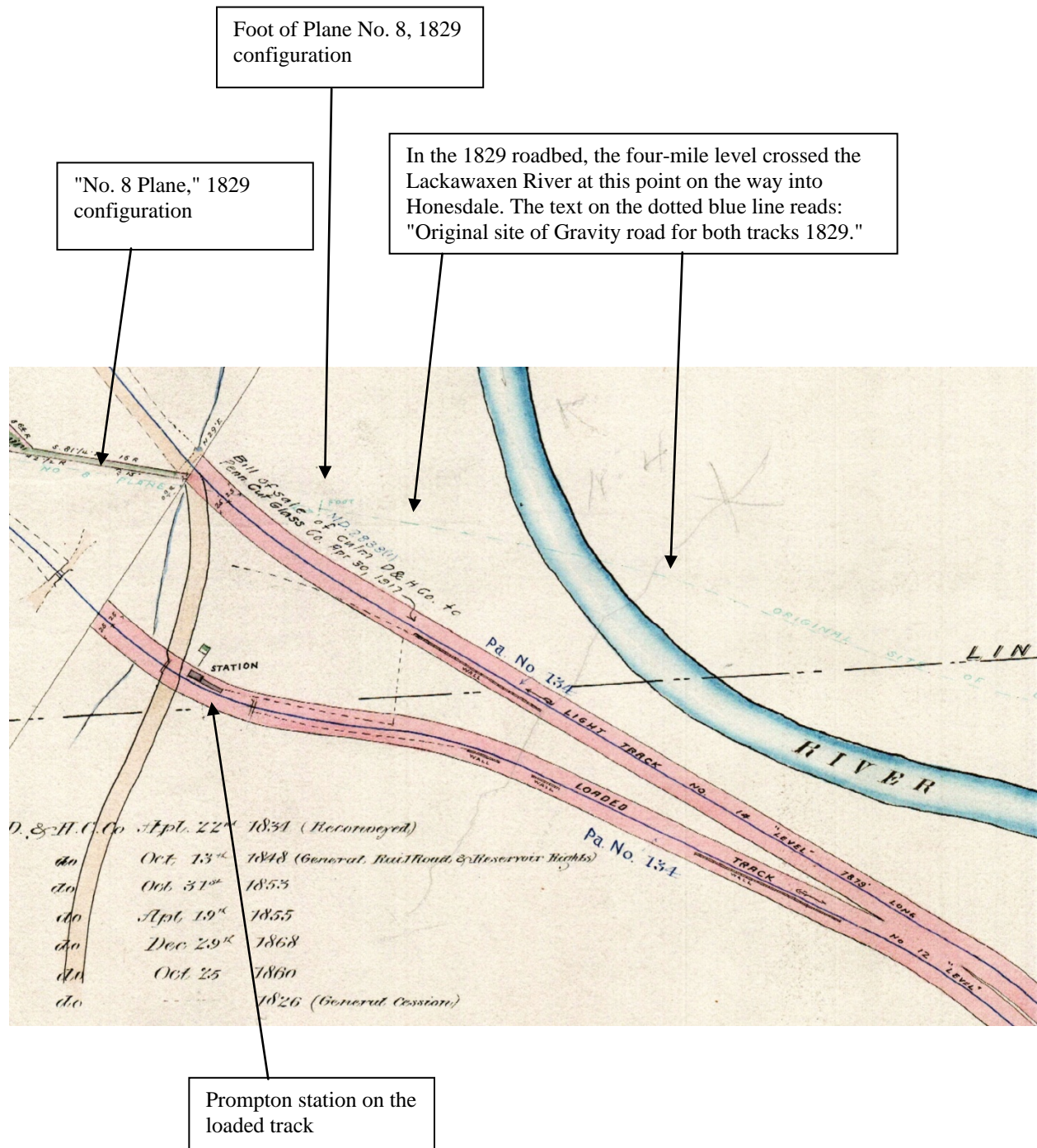
In the middle of Plane 14, the loaded track went under the light track (Plane 14), but there was no possibility of switching cars from light to loaded or vice versa there, as there was at Farnum's Latches or Gill's Latches (which we will focus on in the 1868 unit in this series).

In the *D. & H Deed book – Wayne*, on page 151, there is a map that illustrates the deed, pp. 150-51, dated October 17, 1848, between James Archbald and wife and The Delaware & Hudson

Honesdale and
Clarksville Turnpike

120

In this view from the 1895 Gravity Railroad map volume, we see a portion of Level 14, descending towards Prompton. On the loaded track, on the far left, the Passenger Station on the loaded track at Prompton. We also see important data about the 1829 configuration: the location of the four-mile level (from the foot of Plane No. 8 to Honesdale)—on the other side of the Lackawaxen River from where the light track was positioned in 1843.



[illegible]

122

Accidents, Facts about the Plane, Daily Life

Farnum's Latches (and Cellar Hole No. 2) were located on Level 14. Gill's Latches (and Cellar Hole No. 1) were located on Level 13. Farnum's Latches (and Cellar Hole No. 2) on Level 14: These were not in place in 1845. Were they in place by 1859? I'm not sure that anyone knows when the two sets of latches were installed on the tracks between Honesdale and Waymart. My guess is that they were probably established at the time of the 1859 configuration, when production increased dramatically and when increased storage of coal became necessary in the Honesdale area. We will discuss Gill's Latches and Farnum's Latches in the volume on the 1868 configuration.

4518

Plane No. 15

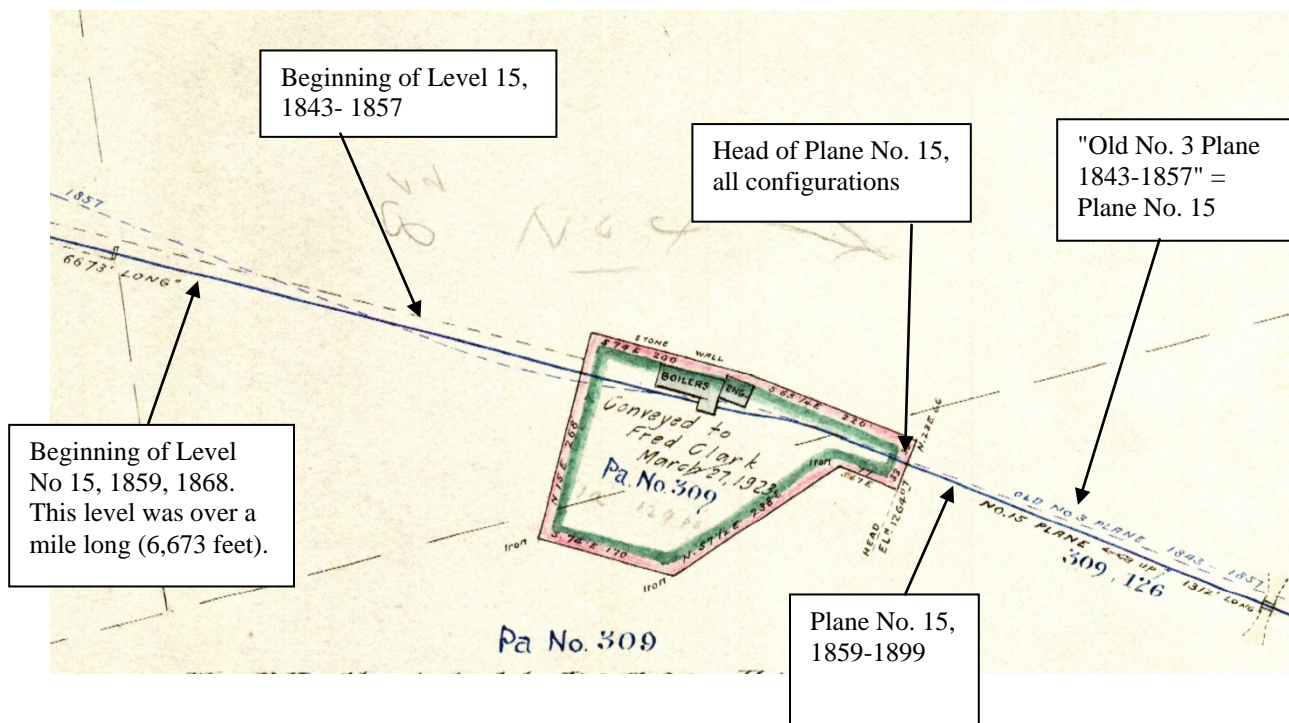
--at Prompton

--1,312 feet long (rise 174.65 feet)

--Level 15 was 6,673 feet long (fall 55.87 feet)

1895 Gravity Railroad map: Prompton: 2 views

The first view: The engine house at the head of No. 15 Plane, which was 1,312 feet long in the 1859 and 1868 configurations. We also see the beginning of Level 15 (1859, 1868), which was 6,673 feet long, which went West on the North side of the present auto highway for at least a mile and then came down the grade, at Steene, and crossed both the highway and the Van Auken at Steene. Marked in blue on this map is the original location of the light track through this area when the light track was installed in 1843.



The second view: In this view, we see the Loaded Track coming down into Pompton. Just after it crosses the road above George Schroeder's house (the house in the lot marked "628"), was the passenger station, on the north side of the track. Level 14 goes right in front of George Schroeder's house and crosses the Honesdale Turnpike to the foot of No. 15, where the passenger and freight stations on the light track at Pompton are located. The original location (1843) of the light track/Plane 15 is marked in blue.

The location of the "Old Water Wheel," which powered this plane (called No. 3, i. e., the third plane out of Honesdale, i. e., No. 15) when it was installed in 1843, is shown. The "Old Race" (dotted lines) from the Lackawaxen is also shown. Note that Plane No. 15 (1,312 feet long) is a little to the south of the "Original Location of Plane No. 3 [the third plane out of Honesdale, i. e., Plane No. 15] 1843-1857." The present location of Plane No. 15 is the site of the plane, then, from 1857 to the end of the nineteenth century, when the 1895 Gravity Railroad map in question was drawn.

Following the installation of the light track from Honesdale to Waymart, 1843-1845, there were some “modifications” made to that portion of the line: water wheels at the foot of Planes 15, 16, and 17 replaced by steam engines at the heads of those planes; slight moving/fine tuning of the location of Plane 15, and several levels. Also note that the exact location of “Old No. 8 Plane” (in the 1829 configuration) is also shown at the bottom of the map, a little to the north of the loaded track (the 10-mile level, aka Level 12) as it descends through Prompton

"Old Water Wheel" at
foot of Plane No. 15,
1843-1857

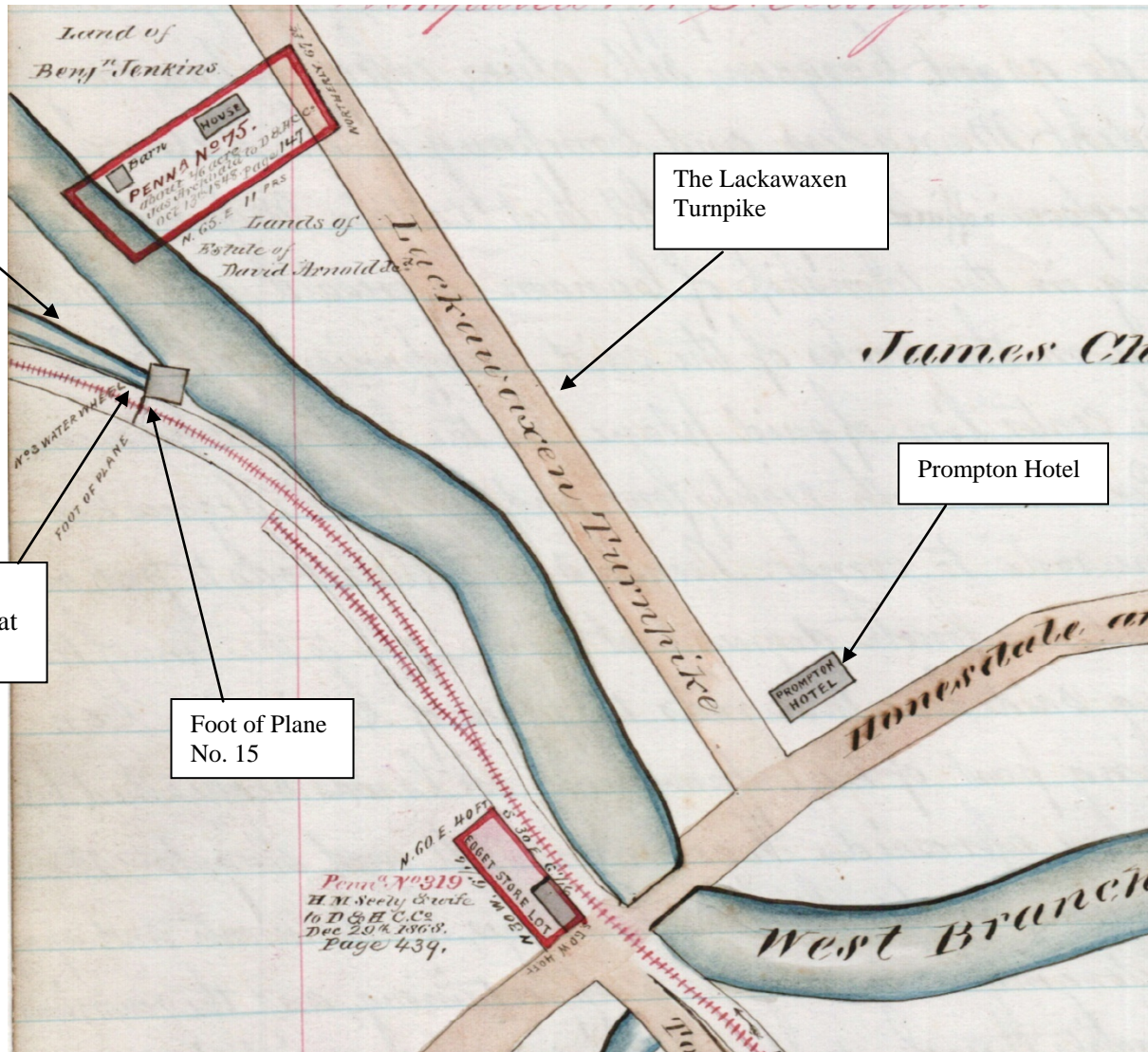
Freight Station

The George
Schroeder
house

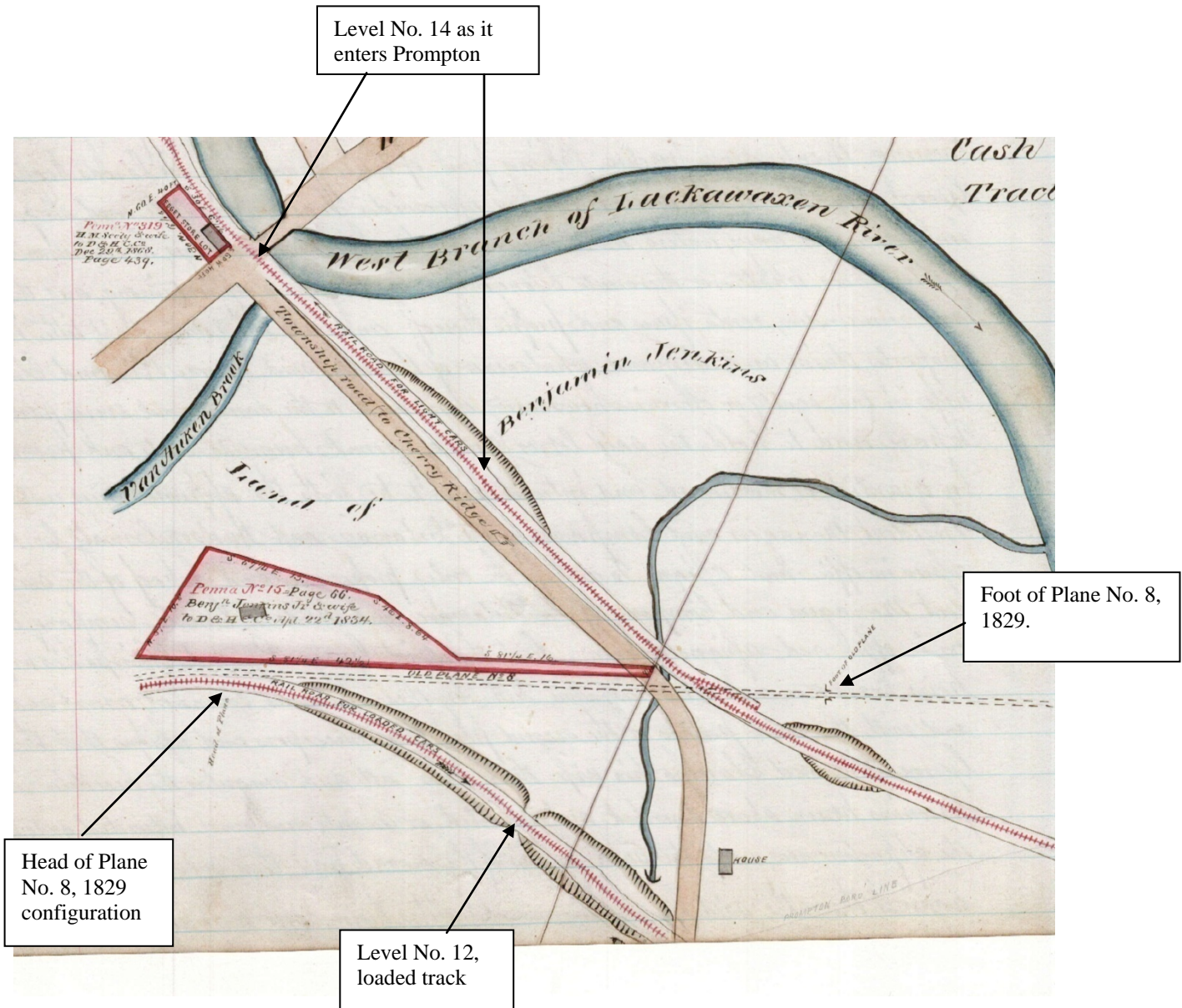
Level No.
14, 1843-
1899

"Old No. 8" 1829

A second map view of the area shown in view two above is given in the D&H Deeds PA on the map on page 86 that illustrates the deed, pp. 85-86 between George Rix and wife and The Delaware and Hudson Canal Company, dated December 27, 1842. Like view two above, the map given immediately below contains a wealth of details about the site (including the exact location of the Prompton Hotel) and the roadbed.



Here is a larger view from that same Rix deed mentioned above: map on page 86 that illustrates the deed, pp. 85-86 between George Rix and wife and The Delaware and Hudson Canal Company, dated December 27, 1842. Note that the exact locations of the Head and the Foot of “Old Plane No. 8” are shown.



Messrs. Evans and Kolus injured in coal train accident at Prompton in 1853:

"*Accident on the Railroad.*--One day last week, as a coal train was passing near Prompton, one of the wheels broke, precipitating one or more of the cars off from the track. Mr. Evans, of this borough, who was riding on the train, was also thrown off, and seriously injured. Mr. Kolus, the runner of the train was also thrown off, and so fell that the train passed over his legs, crushing it in the most horrible manner. *Honesdale Democrat.*" (*Lackawanna Citizen*, January 7, 1853, p. 2)

Hensel stereograph card No. 1106: *Looking toward Depot, at Prompton, on Light Track* (the depot at Prompton on the light track was at the foot of No. 15); the water shown to the right of the tracks in this photo is the West Branch of the Lackawaxen River.



4519

Plane No. 16

Loaded and Light tracks crossed near the foot of No. 16.

Plane 16: 1,027 feet long (rise 164.02 feet)

Level 16: 10,572 feet long (fall 89.72 feet)

Hensel stereograph card No. 1108: *Looking up No. 16 Plane, Passenger Train on Loaded Track.*
(When you're looking up 16, you're looking in the direction of Waymart; the passenger car is moving to the left, towards Honesdale; when you're looking down 16, you're looking in the direction of Honesdale)

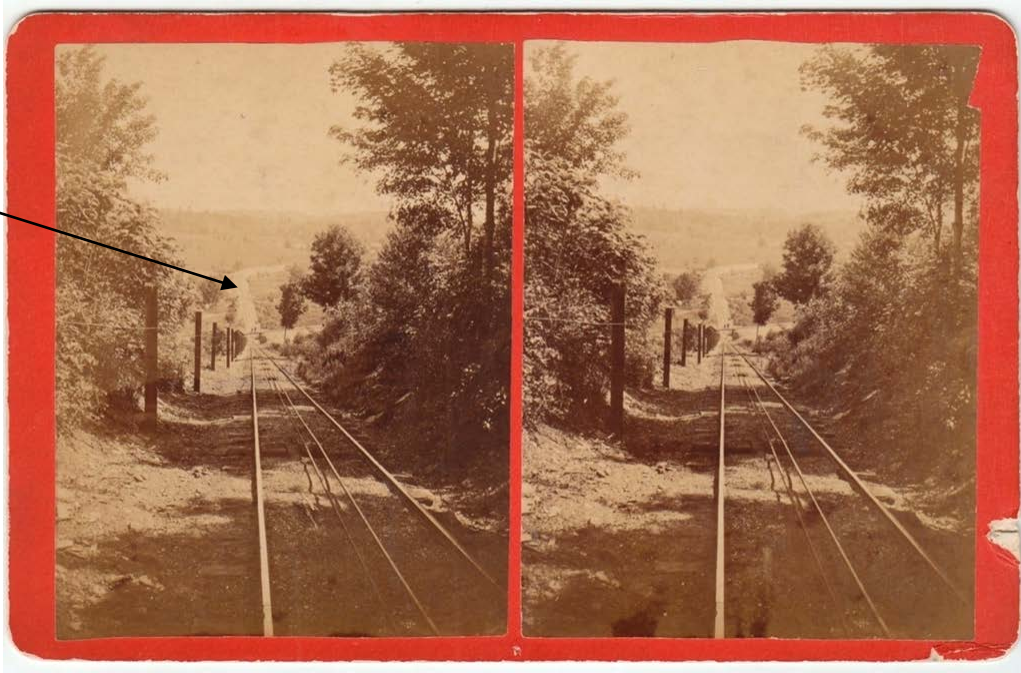
Gravity
passenger
train en
route to
Honesdale



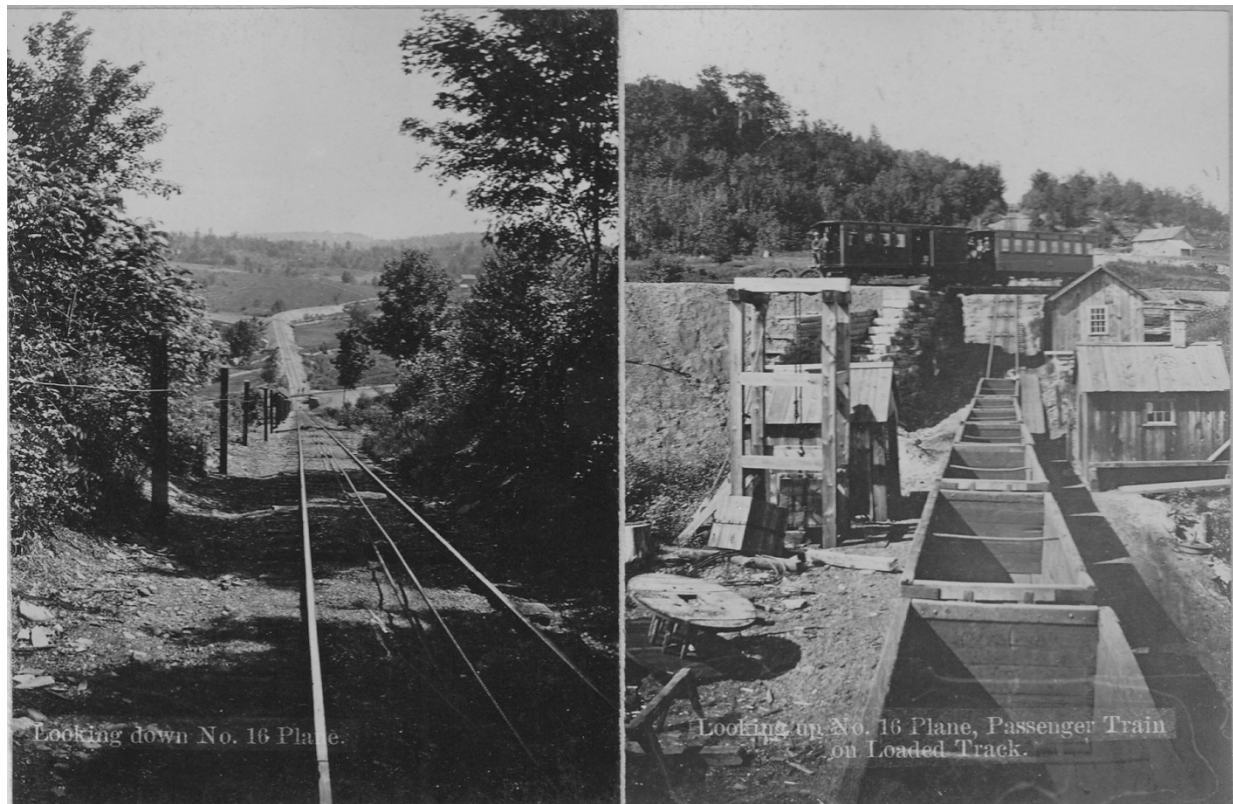
Empty
Gravity coal
cars on their
way back to
the
Lackawanna
Valley

Hensel stereograph card No. 1109: *Looking Down No. 16 Plane*

Level No. 15,
under which
passed the
turnpike road
to Honesdale

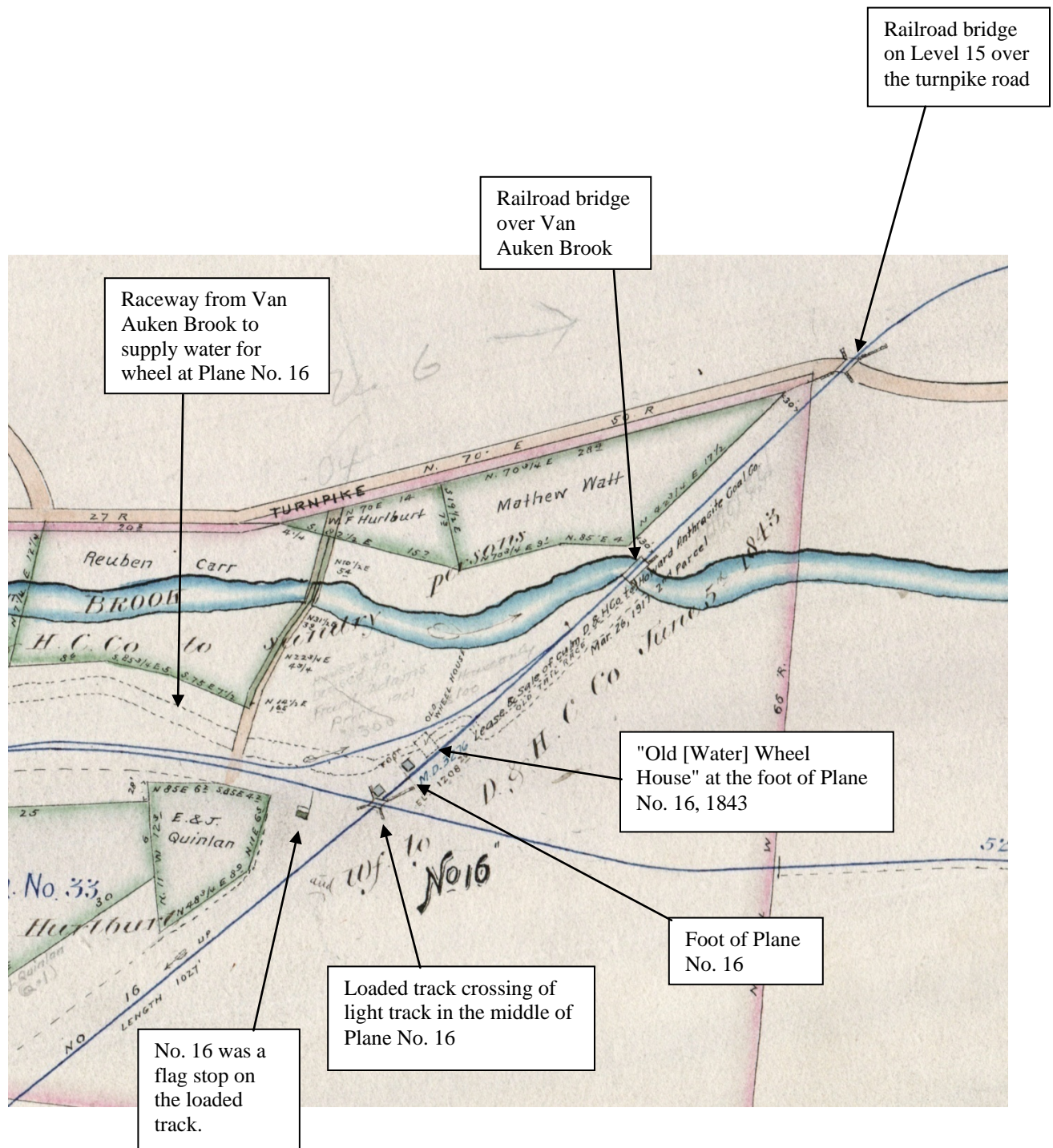


The same two photographs by Hensel, shown here in black and white in a souvenir booklet that Hensel created.



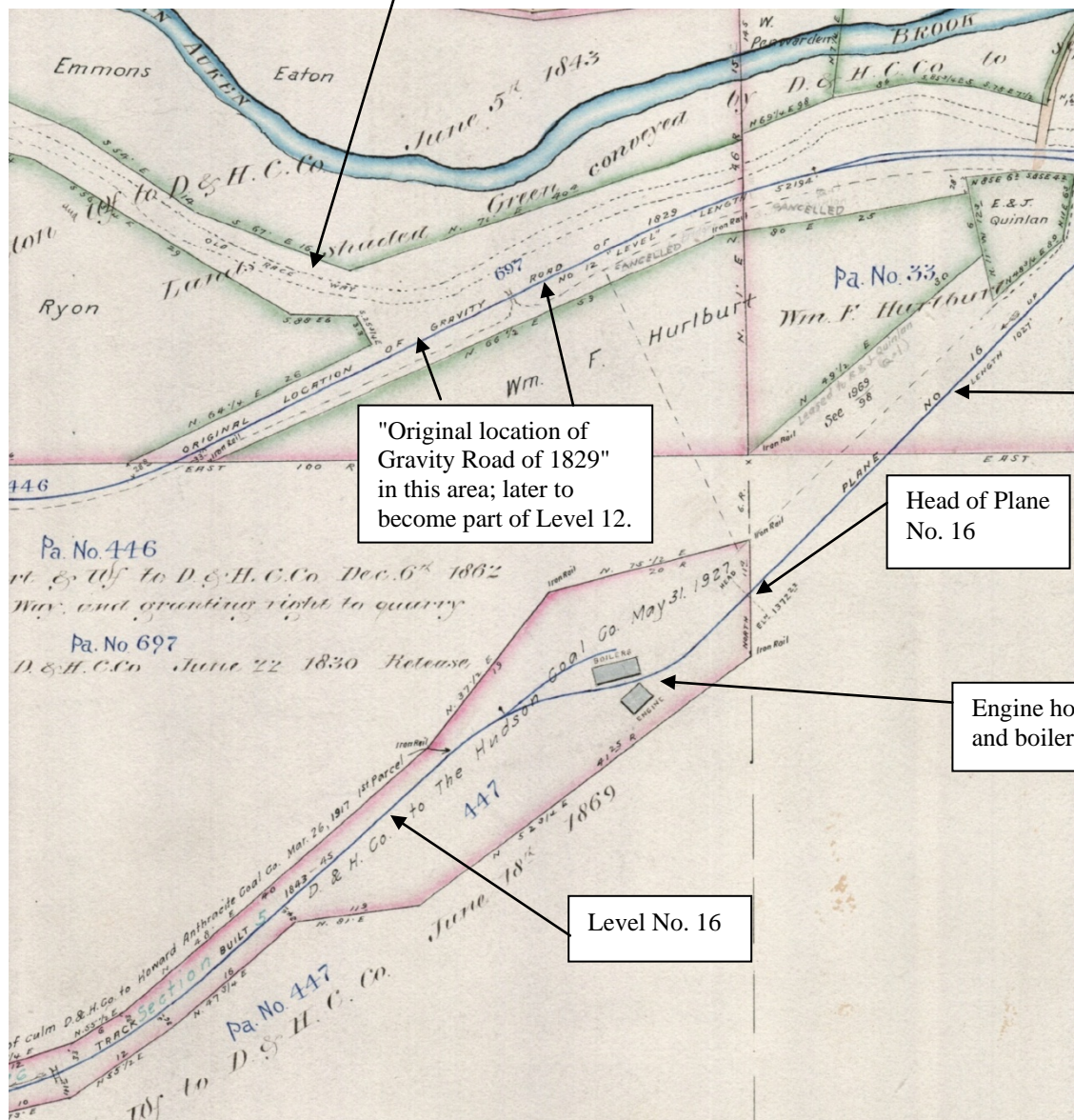
1895 Gravity Railroad map

Plane No. 16. Note that on this map, the exact location of the "Old Wheel House" (water wheel on this plane when it was installed in 1843; dotted line indication of raceway to water supply for wheel) is shown. Foot of this plane below the point where the Light and Loaded tracks crossed. The flag stop on the Loaded track is just to the west of the crossing of the two tracks.



Head, No. 16: 1895 Gravity Railroad map volume. Shown in blue is the original location of the light track through this area.

"Old Race Way" from Van Auken Brook to water wheel at No.16. In this view, we see only the middle section of the very long raceway that provided water for the wheel here.



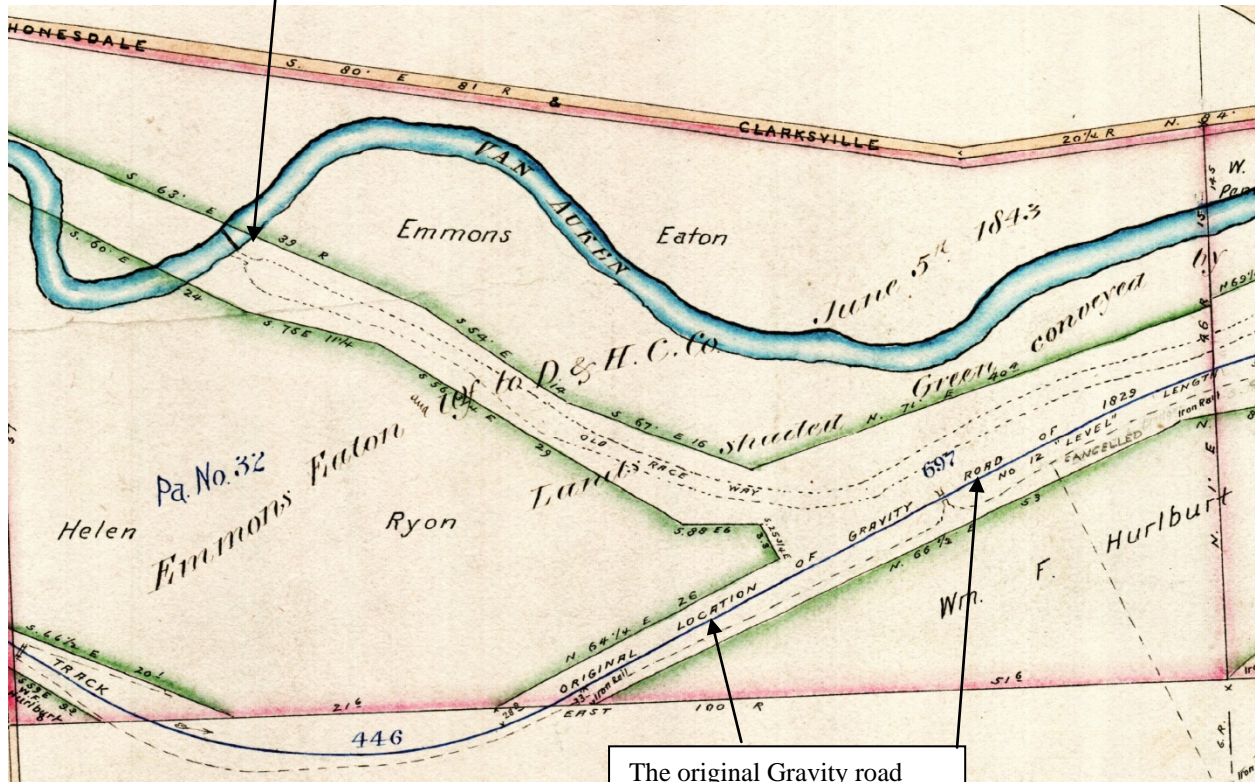
Plane No. 16

Head of Plane
No. 16

Engine house
and boilers

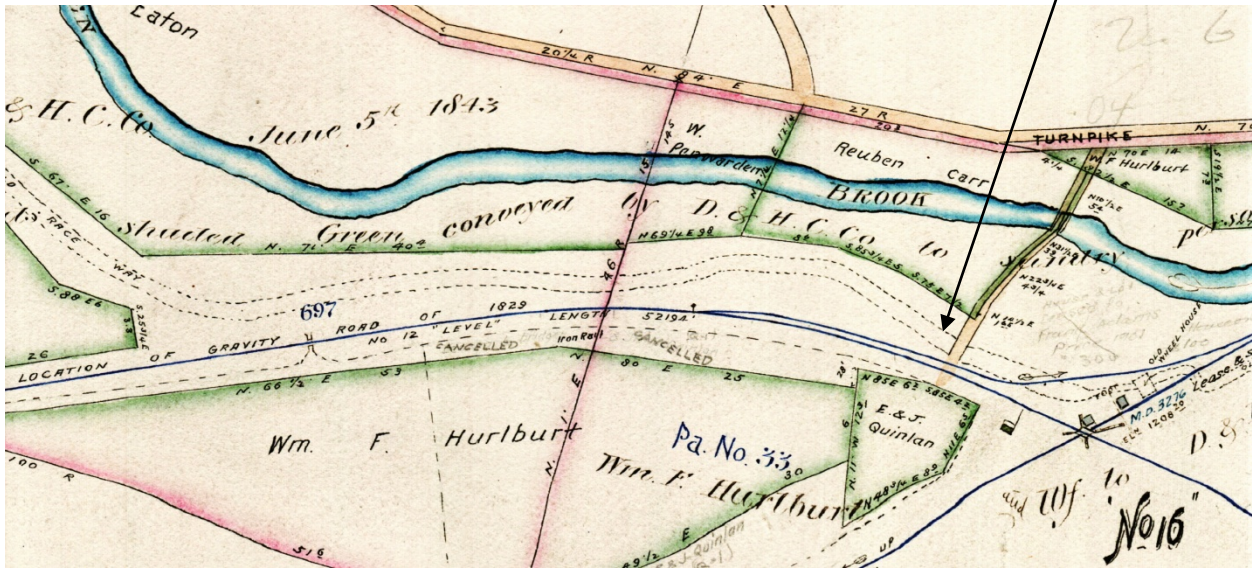
Level No. 16

The beginning of the raceway was a considerable distance up stream from the wheel.

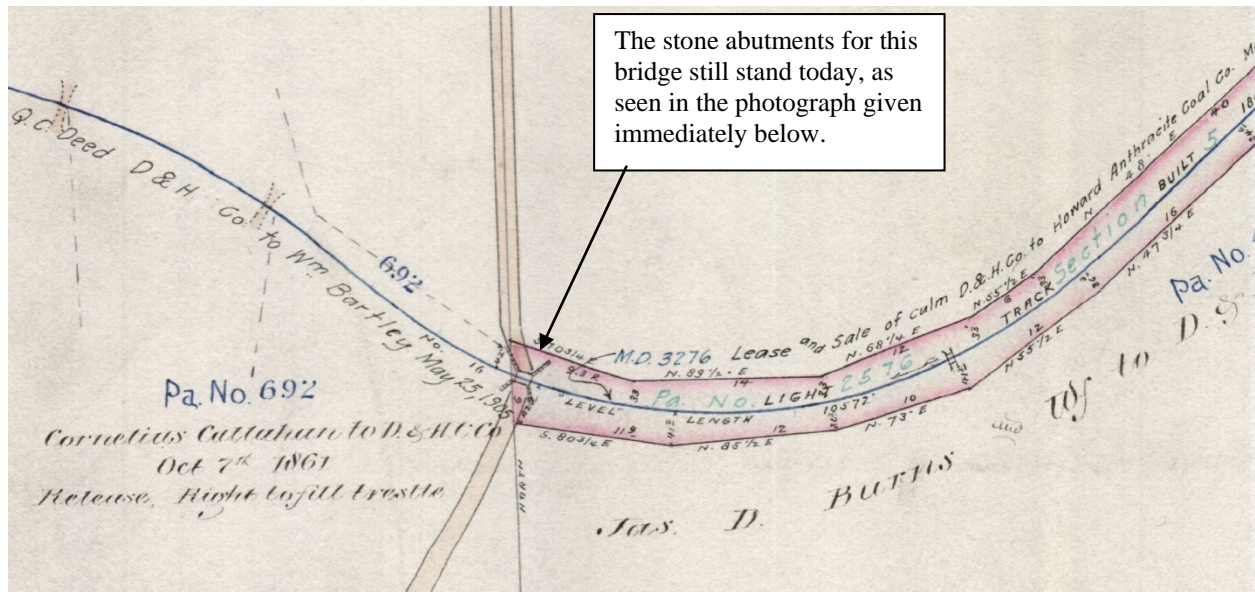


The original Gravity road through this section became Level 12 in 1868.

The portion of the raceway closest to the wheel



Bridge foundation/culvert on Level 16, from 1895 Gravity Railroad map volume:



Given below are two photographs by the author that were taken in October 2011 of the bridge/culvert abutment that supported a portion of Level 16 on its way to the foot of No. 17, to the west of Keene's Pond. The wagon road passed under the light track here, passing between the two abutments.

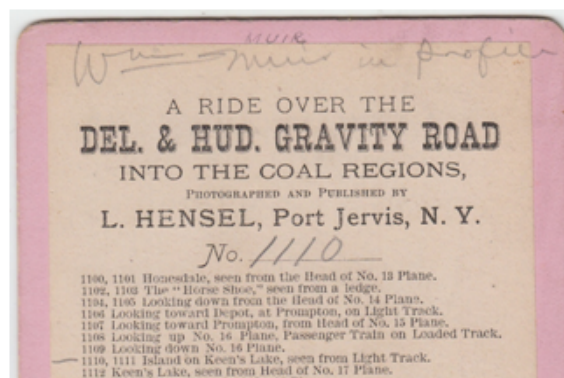


(the loaded track passed by Keene's Pond on the Route 6 side of the Pond; the light track went up to Waymart on the back side of Keene's Pond; on the reverse of this card, the following notation about the identity of the person shown in this card, is given: "Wm Muir in profile"). This section of the Light track was Level 16.

The island in Keen's Pond



"Wm Muir in
profile"; this is a
detail of the back of
the photo given
immediately above.



Given below is the second view of the Island on Keen's Lake as seen from the Light track.
Hensel No. 1110-1111: *Island on Keen's Lake, seen from Light Track*

The island in
Keen's Pond, as
seen from the
back of the pond



The end of Level 16, at the back of Keen's Pond, at the foot of Plane No. 17, as seen on the 1895 Gravity Railroad map volume:

Accidents, Facts about the Plane, Daily Life

Plane No. 16.

4520

Plane No. 17

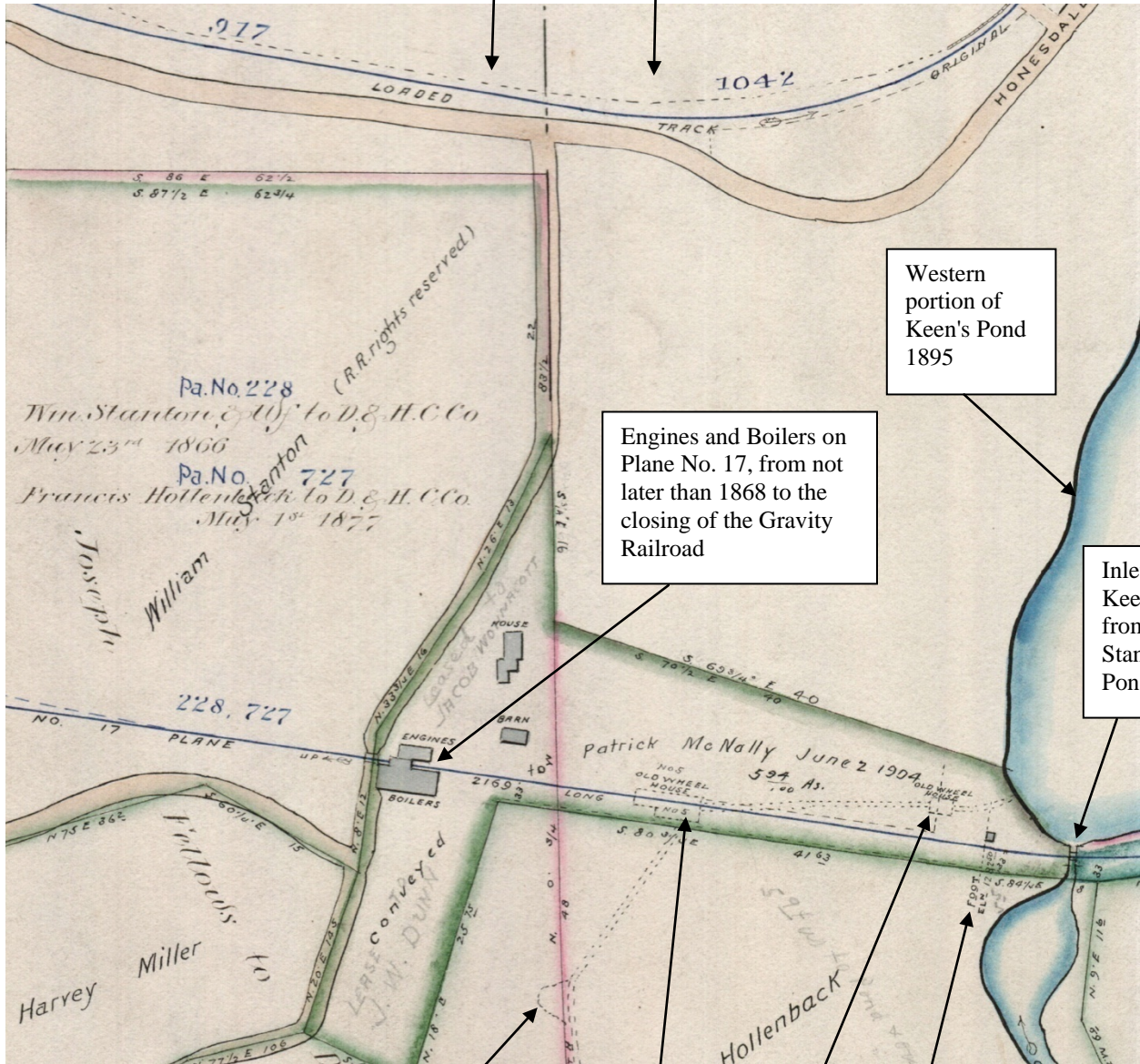
-- Plane: 2,169 feet long (rise 185.70 feet)

--Level: 6,869 feet long (fall 54. 76 feet)

1895 Gravity Railroad map detail:

The foot of Plane No. 17 (a short distance west of the Western edge of Keen's Pond--where the outlet of Stanton Pond flows into Keen's Pond); the engine/boiler house on Plane No. 17, and portions of Plane No. 17, both above and below the engine/boiler house, are shown on this map. Also shown on this map is the location of "No. 5 Old Wheel House" and the raceway—dotted lines—from Keen's Pond to supply water for the wheel. Plane No. 17, which was the 5th plane on the light track out of Honesdale, is usually referred to by folks from Honesdale as "Plane No. 5." From 1843 to 1846 this plane was powered by a stationary steam engine. From 1846 up to not later than 1868, it was powered by two waterwheels. From not later than 1868 up to the closing of the Gravity Railroad, it was again powered by a stationary steam engine.

The loaded track, 1895, through the Keen's Pond area was more or less on the same roadbed as the Six-mile Level in the 1829 configuration (dotted line) of the road.



Western portion of Keen's Pond 1895

Engines and Boilers on Plane No. 17, from not later than 1868 to the closing of the Gravity Railroad

Inlet to Keen's Pond from Stanton's Pond

Raceway from Stanton's Pond to provide water for wheels at Plane No. 17

"No. 5 OLD WHEEL HOUSE" and "OLD WHEEL HOUSE" at Plane No. 17

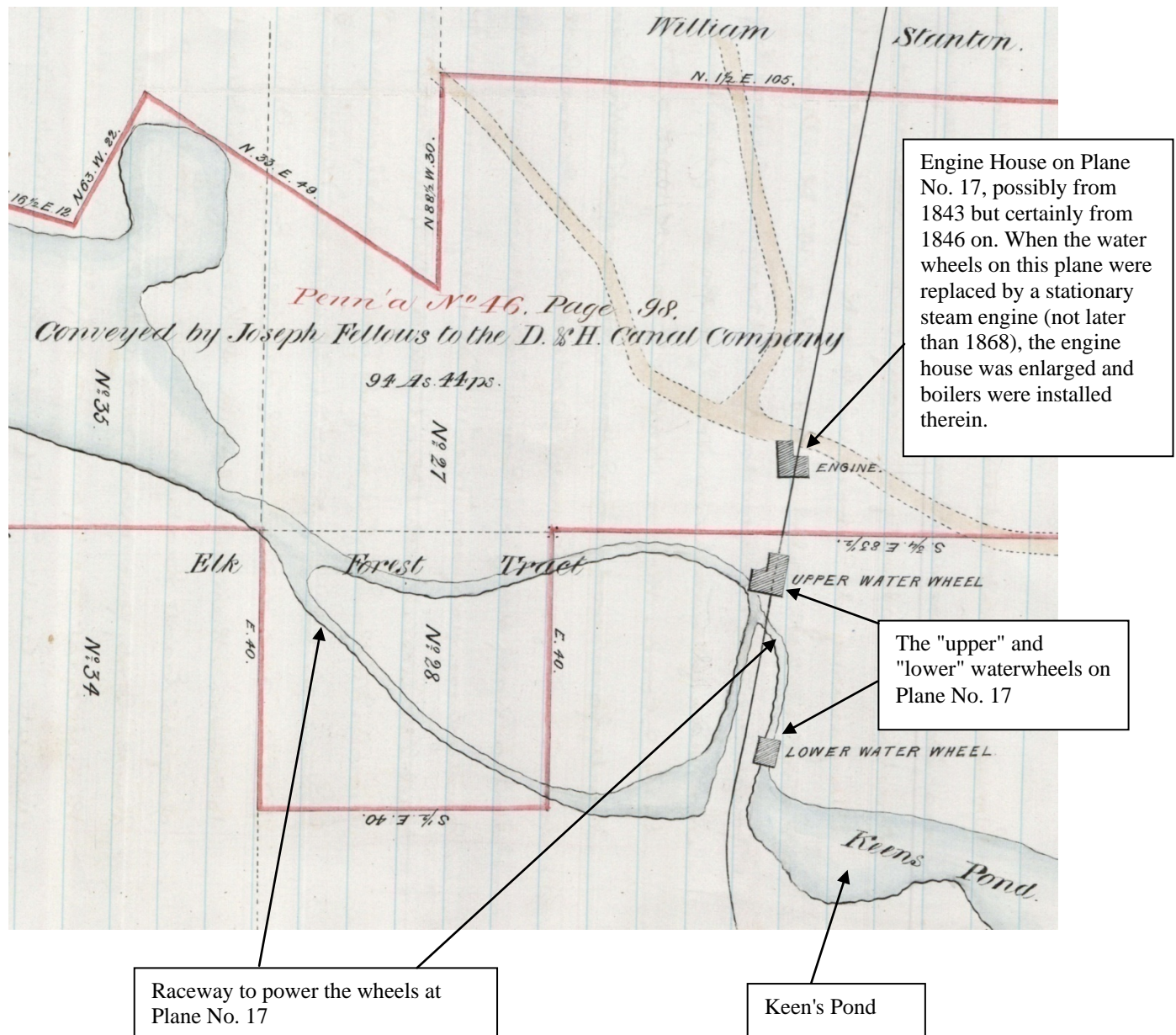
Foot of Plane No. 17, possibly from 1843 on, but certainly from not later than 1868 to the closing of the Gravity Railroad

[illegible]

"Old Wheel
House"

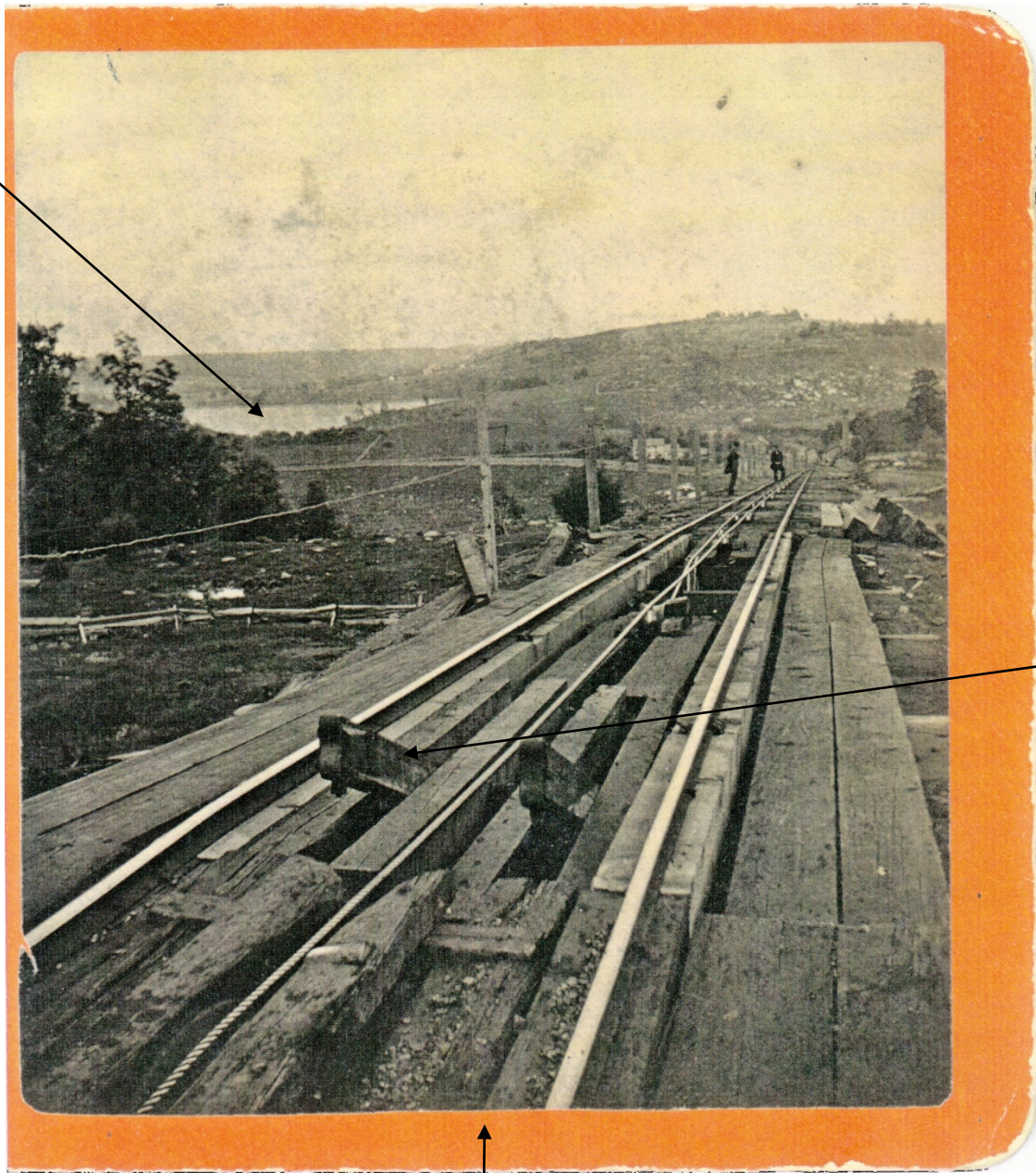
143

The area at the foot of Plane 17 is also shown on the map that illustrates the deed, dated July 1, 1845, between Joseph Fellows and The Delaware and Hudson Canal Company. The deed is in the D&H Deed Book, PA, p. 27; the map is on page 28. Given below is the relevant portion of that map. Note that there are two water wheels here, Upper Water Wheel and Lower Water Wheel. The Engine House, located about one thousand three hundred feet below the head of the plane (roughly around the middle of the plane), is directly above the Upper Water Wheel.



Hensel, No. 1112: "Keen's Lake, seen from Head of No. 17 Plane"

Shown here is an electronic scan of a paper copy from one-half of an original of the stereocard; paper copy in the collection of the Minisink Valley Historical Society.

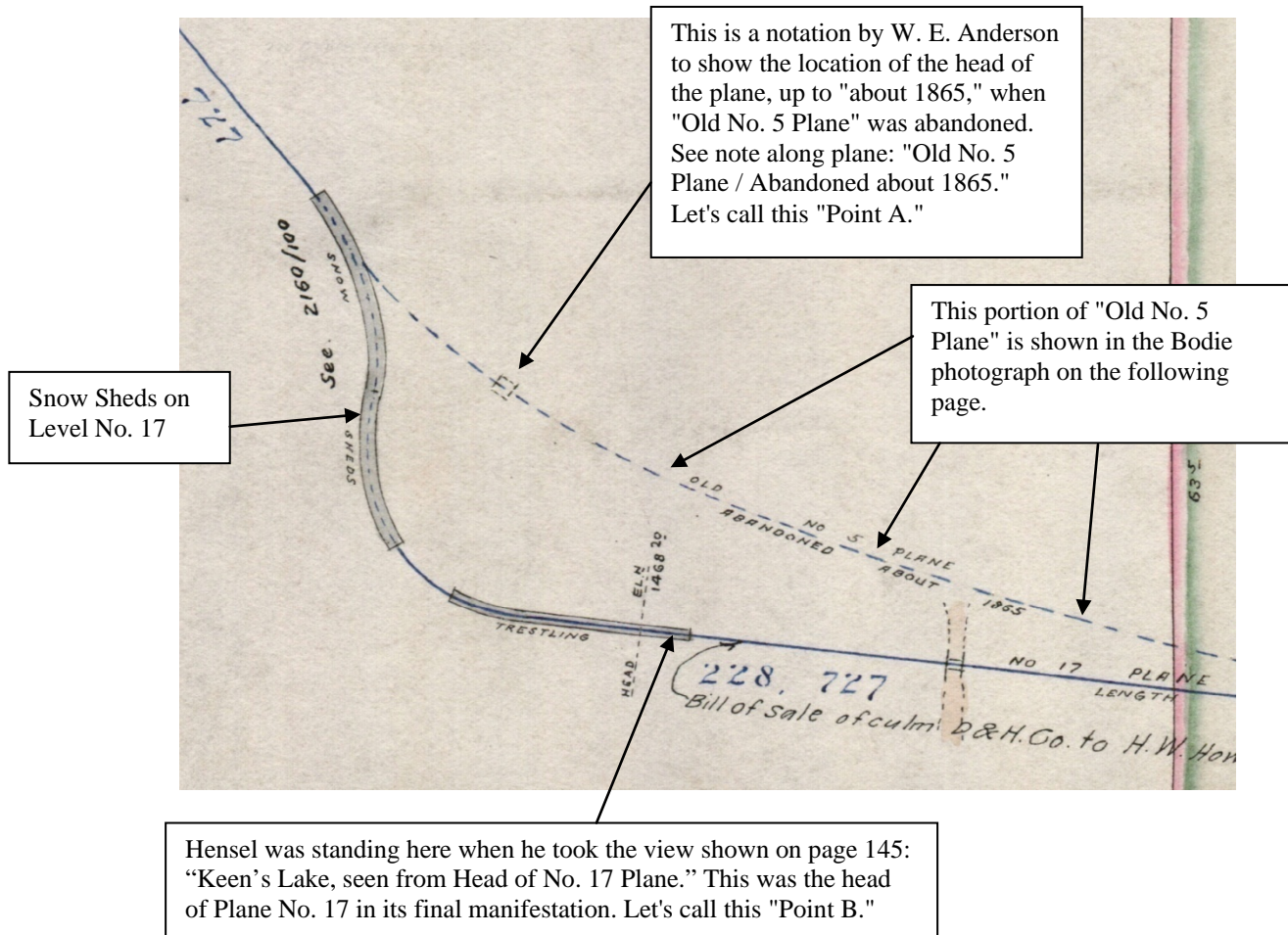


Keen's Pond
seen from
head of Plane
No. 17

Spring-
action stops
to prevent
roll backs
on the
plane

This is the head of Plane No. 17 in
its 1872 manifestation.

Head of Plane No. 17, as seen in the 1895 Gravity Railroad map volume.



Snow sheds on Level No. 17. These were the only snow sheds on the D&H Gravity Railroad. They were completed in February 1872. This we know from a notice that was published in the February 9, 1872 issue of the *Wayne County Democrat*: "The Del. and Hud Co. has completed large and extensive snow sheds below plane No. 17. It will save many days hard shoveling during heavy snow storms." Given the fact that the snow sheds were completed in February 1872, the head of Plane No. 17 was, in all probability, moved from "Point A" to "Point B" at that time or in the spring of 1872. "About 1865" in W. E. Anderson's note on this map about the abandonment of Old No. 5 can, therefore, thanks to the above notice in the *Wayne County Democrat* be clarified, and understood (in our humble opinion) to mean "1872."

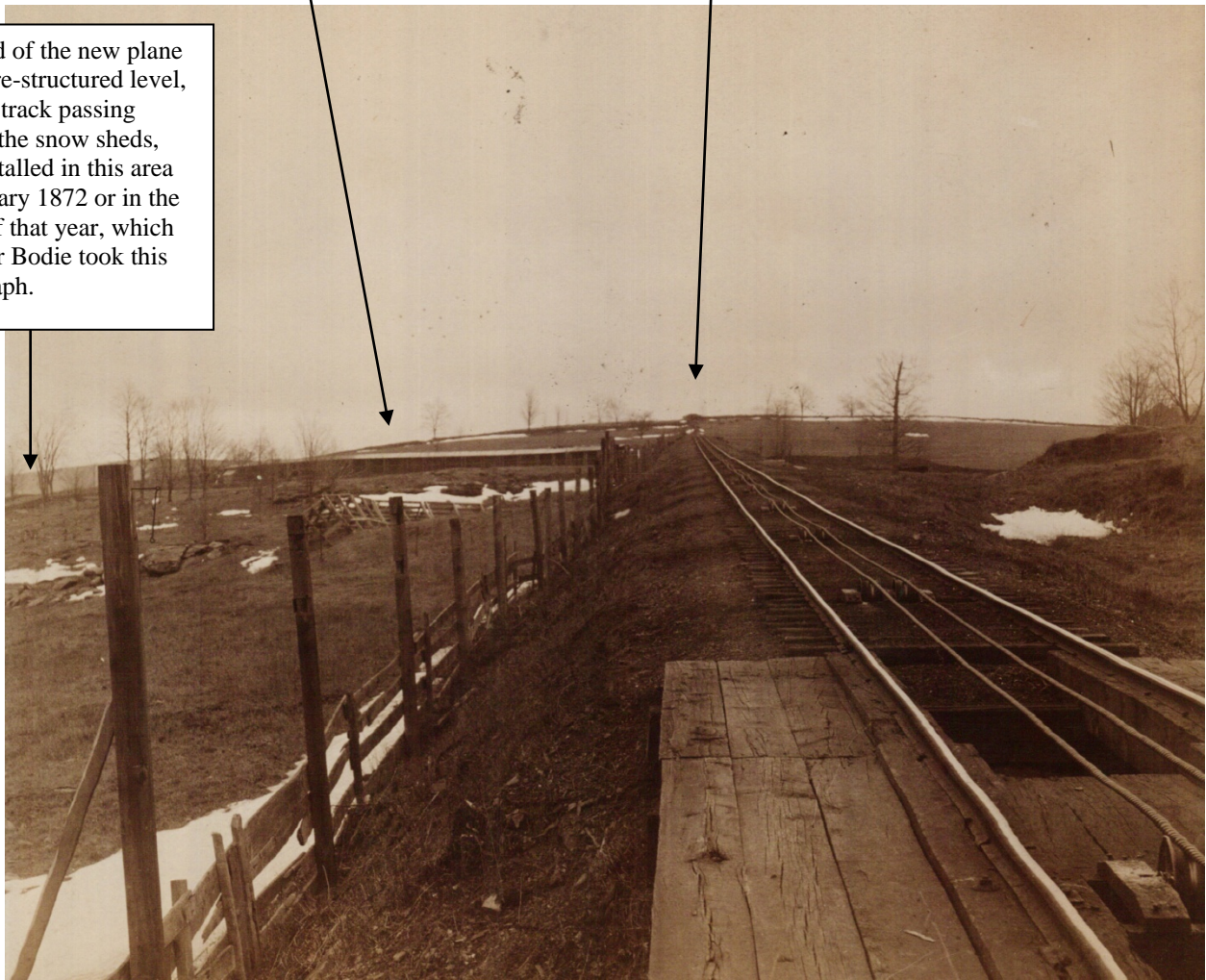
Given below is a photograph by J. A. Bodie, titled "Upper Half of Plane No. 17"; photo in the collection of the Wayne County Historical Society.

This photograph is a view of the "Upper Half of Plane No. 17" (called "Old No 5 Plane" on the map on page 146). This photograph was taken before the head of Plane No. 17 was moved from "Point A" to "Point B," which took place, in our contention, in February 1872 or in the spring of that year. "In this photograph we see not only the portion of "Old No. 5" above the engine house, but also the snow sheds before the plane was moved to the left and before the sheds were incorporated into the new alignment.

Snow sheds, completed in February 1872 but not yet incorporated into the new alignment.

This is the head of "Old No. 5 Plane" that is indicated on the map shown immediately above. These tracks, with cables in them, are the upper half of Plane No. 17 ("Old No. 5 Plane").

The head of the new plane and the re-structured level, with the track passing through the snow sheds, were installed in this area in February 1872 or in the spring of that year, which was after Bodie took this photograph.



In 1872 the head of Plane No. 17 was moved from what we've identified on page 146 as Point A to Point B—which means that from 1872 on Plane No.17 was shorter and that Level No.17 was longer than previously.

When the new level and the snow sheds were incorporated into the system in 1872 , the head of Plane No. 17 had to be elevated a few feet (hence the trestling at the head of the plane/beginning of the level) so that the cars would roll all the way into Waymart.

Once the light cars were pulled up Plane 17 and disconnected from the cable, they rolled down Level 17 (6,689 feet long) into Waymart.

Once the empty cars were returned to the foot of Plane No. 17 in Waymart, they were worked back through the system to Carbondale and the Lackawanna Valley through the planes on the Moosic Mountain.

Accidents, Facts about the Plane, Daily Life

4521

Carbondale and the D&H in General at the Time of the 1845 Configuration

The Russells from Scotland came to America in 1840 and settled in the Elkdale area.

John Russell (b. 1778 in Brigend, Scotland; d. 11-20-1840, at Elkdale, PA) and his wife, Christina Anderson (d. at the age of 80 on March 14, 1861) came to America around October 1, 1840 and came to McAlla City (now Elkdale) to visit Martha Anderson and Archibld McAlla. John Russell died there six weeks after arriving in America. They were the parents of seven children: Martha (m. Alexander Bruce), Jean (m. William Bruce), Christina (m. David Liddell), James (m. Margaret Locke), Minnie (m. Joseph Slocum), John (m. Jeanette Cameron), and May (m. William McAlla).

The Andersons from Scotland also lived in Elkdale and environs.

The three daughters of William Anderson and Martha Fleming came to America married, and lived in the Elkdale area: Martha (m. Archibald McAlla), May (m. William Tinker) and Christina (m. John Russell).

Farms in the countryside around Carbondale:

In the countryside around Carbondale in the nineteenth century and well into the twentieth century were a large number of farms that provided a wide array of foodstuffs for Carbondale and the industrialized Lackawanna Valley. Among those farms was the one established by James and Margaret Russell in Fell Township.

Shown below is the May page of the 1987 *Birthday and Historical Calendar* that was produced by the Carbondale Historical Society. Given here is the photograph of the Russell Homestead that was taken by Helen Loomis (Russell) Powell in the early years of the twentieth century, and which appears on the May page of the 1987 calendar.



Here are two photographs taken by the author in the 1962, when the Russell Homestead became the Homestead Golf Course.



James and Margaret Russell were also featured in *A Photographic Record of Carbondale, Pennsylvania The Pioneer City*, Volume I, 2004, p. 4:



Margaret Gillespie Locke Russell (1833-1904). Born in Scotland, she came to Carbondale in the 1840s with her mother, Jeanette Gillespie Murray Locke, and her sister, Jeanette Hume Locke. They lived at 35 River Street, where John Gillespie Murray (half brother to Margaret Russell) ultimately established a residence subsequent to his arrival in America from Scotland with his maternal grandparents, John and Jeanette (Hume) Gillespie in the late 1830s. Following the death of her husband, James Russell, in 1872, Margaret Russell ran the family dairy farm for 32 years, all the while raising eight children.



James Russell (1815-1872). Born in Scotland, he came here in the 1840s with many other Scottish and English settlers, and became a highly successful farmer, dairyman, and community leader. The farm that he established in Fell Township was designated a Pennsylvania Century Farm on March 7, 1986. That farm is still in the family and is now the site of the Homestead Golf Course, which was established in 1962.

4

1880 (p. 452E): MARGARET RUSSELL was born in Scotland, came to Carbondale in April, 1847, and married James Russell in January, 1851. Mr. Russell came with his father's family to Greenfield in the fall of 1840, and has been known as a farmer and dairyman."

Here is the portrait of James Russell that is given in *PABRLC*, pp. 960-61: "JAMES RUSSELL was the eldest son of John and Christina (Anderson) Russell, born in Ayrshire, Scotland, in June, 1815. During the summer of 1840 the family emigrated to the United States, locating first at McAlla City in Clifford Township, Susquehanna County, Pa. Within seven weeks of their arrival in this country the father died, and the eldest son was called upon to take his place as manager of the family affairs. In the spring of 1841 the family purchased a tract of land, partly cleared, near Crystal Lake, in the township of Fell, where the family home was erected and maintained until the death of the widowed mother, in March, 1861. In the year 1847, James Russell purchased the farm property that still bears his name, and the first day of January, 1851, witnessed his marriage

to Margaret Locke of Carbondale. Ten children were born to them, six daughters and four sons, of whom three sons James A., ex-mayor of the city of Carbondale; George M., William A., and three daughters, Mrs. S. S. Jones, Jeanette L., and Jennie M., are still living. / Few men have enjoyed the confidence of their fellowmen in such an eminent degree as James Russell did during his lifetime. He served the district in which he lived continuously from 1849 as school director and treasurer of the township. He was elected to the office of justice of the peace in 1851 and re-elected at the expiration of each term, without opposition. He served three terms as supervisor of the township and was an ardent advocate of good roads and public improvements generally. He was a thorough-going business man, methodical, tireless and scrupulously honest in all his dealings. With him public office was accepted with all its responsibilities; he never shirked a duty, nor feared public criticism. He believed in doing right, and did it. He was always a busy man, and managed to accomplish by methodical work what would have been impossible without systematic planning. He was a scientific farmer and his lands were tilled to secure the largest and best crops. His farm stock was kept up to a high standard. He was progressive and secured at once the labor-saving implements of agriculture, for he was always of the opinion that the best of everything was none too good, to help lighten man's burdens. / Mr. Russell was public-spirited, generous, always ready to assist those in need, and that promptly. In politics he was an ardent, old-school Democrat his patriotism was never questioned and in the political campaigns he took an active part. He was enterprising and his efforts were not confined to agricultural pursuits. For a number of years he operated the Fall Brook colliery and the delivery of the Delaware and Hudson coal in the city of Carbondale. [emphasis added] All his undertakings were successful, for the reason that he was in no sense a speculator, but holding firmly to the law that 'men must earn what they call their own.' This, and all his opinions upon matters appertaining to the daily life were formed from practical observation and experience. He was in no sense a theorist but entirely practical, controlled by a high sense of duty to his Maker, and a tender regard for his fellowmen. His death occurred May 12, 1872."

Robert Ruthven and family come to Carbondale in 1841:

"DEATH OF JAMES RUTHVEN. / Once of Carbondale, and Later a Prominent Citizen of Scranton. / James Ruthven, a prominent citizen of Scranton, died in that city yesterday morning. He was stricken with paralysis over a year ago and was then laid aside from the duties of practical life. Mr. Ruthven was born September 23, 1826, and was the son of Robert Ruthven, who was at one time a prominent business man in Boston, and for one or two sessions represented that city in part in the General Court. The deceased came with his father's family to Carbondale in 1841. An older brother, the late Alexander Ruthven, had been acting for sometime previous as chief clerk and paymaster for the D. & H. C. C. at this place. [emphasis added] James was employed in various capacities for the company here and as clerk in the post office until 1857, when he removed to Scranton, where he soon assumed an important position in the coal department of the D. L. & W. Co., in whose employ he remained until incapacitated by illness. . . Before leaving Carbondale the deceased was united in marriage to Mary Ann, a daughter of the late Patrick Archbald. . ." (*Carbondale Leader*, November 11, 1887, p. 4)

Coal discovered in Archbald by James Archbald and James Clarkson in 1843:

James Archbald and his assistant James Clarkson, two engineers of the Delaware and Hudson Canal Company, discovered coal in Archbald in 1843. In 1846 White Oak mine was opened and the gravity railroad was extended there in that same year.

More about James Clarkson, who emigrated from Scotland in 1830 and became, ultimately, the mine superintendent for the D&H. In the article titled "**CARBONDALE IN ITS INFANCY [Part 4] / A Series of Articles on the Early Days of The Anthracite city by One of Its Pioneers**" by P. S. Joslin (*Carbondale Leader*, August 26, 1899, p. 6) we read the following about James Clarkson:

"James Clarkson emigrated from Scotland in 1830 and came to Philadelphia. In Scotland he had been the overseer of a gentleman's landed estate, but believing the United States had greater room for a young man to grow, his ambition prompted him to leave the heather and bluebells of his naïve land and seek his fortune on this side of the Atlantic. / On his arrival in Philadelphia he engaged himself to Peter Graham to take charge of his lands in the vicinity of Dundaff. Not feeling satisfied with his situation there, he gave it up and came to Carbondale. He and Peter Campbell went to dealing in cattle and butchering. Soon afterward they took the contract of the D. & H. Canal company, to mine coal, employing their own men, and working several chambers. The foreman or mine boss not proving satisfactory Mr. Clarkson entered the mine himself to superintend the work. Mr. Archbald believing that Mr. Clarkson would be a valuable acquisition, made him mine superintendent for the company which position he occupied for about thirty years. [emphasis added] / Mr. Clarkson was a noble specimen of a Scottish gentleman, standing about six feet two inches high, and weighing over 200 pounds, of his ability as a mine superintendent his long continuance in the company's employment speaks for itself. When Mr. Archbald resigned his position as general superintendent, Mr. Clarkson also gave up his position. Beside his inside work, he had an oversight over much of the outside work. If any accident or damage happened anywhere, I have heard it spoken of him, as if by intuition, after viewing the work he would place the blame unerringly where and upon whom it belonged. / Although he was of a stern nature, exacting from everyone what was their duty to do, yet socially he was a very pleasant and kind man. When the writer was alderman and any suit was commenced by any miner or laborer in the mines, of a criminal nature, like assault and battery, or surety of the peace, if he learned of it he would stop their cars until they settled it and bought a statement from the alderman to that effect. / In his position as superintendent he had opportunities of securing fine specimens of fossils, which he utilized by exchanging with other collectors or possessors of minerals until he probably had the largest and most varied and valuable collection of any single individual in the United States. During the war of the Rebellion he sent his collection to New York and gave it to the sanitary commission who sold it for \$1,000. / In his life time he accumulated a handsome competence, and for several years after his resignation from the company's employ lived a life of leisure. He was a great reader, and enjoyed the foreign quarterlies very much. He and Alexander Bryden co-superintendent for the company were instrumental in inaugurating a circulating library association, where only American and Foreign

monthlies and quarterlies were used. He died November 10, 1876, at the age of seventy-seven years. / Mr. Clarkson had two children, Edward, who is now a resident of Carbondale and Jemima, who married John Love, both of whom are now dead. One daughter, Margaret Love, still survives, making her home in Brooklyn, N. Y., during the winter, and in summer at her cottage in Benton township, this county."

More on James Clarkson's fossil collection:

"During his connection with the mines, James Clarkson made one of the largest and most interesting private collections of fossils in the world. This he sold to the Smithsonian Institute at Washington for \$10,000 and it is now on exhibition there. The sale was made during the Civil War and the sum received was donated by him to the relief of the soldiers in the fields and hospitals." (*Portrait and Biographical Portrait of Lackawanna County Pennsylvania*, Edward Clarkson biography, pp. 200-201)

"DEATH OF JAMES CLARKSON, ESQ. / An Old Landmark Gone. / We regret this week to be obliged to chronicle the death of one of the pioneers of our town and of the Lackawanna Valley, JAMES CLARKSON, Esq., who departed this life at nine o'clock this (Friday,) morning. As is well known Mr. Clarkson was one of the early settlers of this town, and for many years connected with the Delaware and Hudson Canal Company; and to his discretion and honest management in those early days much of the after prosperity as well as early success of the corporation was due. For many years he has been in poor health from a pulmonary difficulty, and finally at nine o'clock this morning breathed his last at his residence on Smith Street in this city at the ripe old age of seventy-seven years. Obituary next week. / The funeral will take place from his late residence on Smith street, Sunday afternoon at 2 o'clock." (*Carbondale Advance*, November 11, 1876, p. 3)

"James Clarkson, / Whose death was briefly announced in last week's *Advance*, was born in Edinburgh, Scotland, on the 4th day of July, 1799. He was originally intended by his family for one of the liberal professions—that of the ministry of the Scottish Kirk—and his early studies were directed in a measure to that end; but he soon relinquished that idea, for his tastes and predilections were more in accordance with science than theology. When he was about 14, he attracted the attention of Lord Hermond who possessed large landed estates near Edinburgh. Lord H. took him into his employ and placed him under the tuition of his chief agricultural manager, and thus he made himself practically familiar with the science of farming. With Lord Hermond he lived many years in an important capacity, acting as his principal manager, attending cattle fairs, buying and selling cattle in large numbers, &c. When about 30 years of age he left Lord Hermond's employ and emigrated to the United States, landing in the year 1829. / Soon after coming to this country he made arrangements with the late Peter Graham, Esq., of Philadelphia, to take charge of his farm near Dundaff. Here he remained only about a year or so and came to Carbondale in the spring of 1831. He began his career here by taking a contract in the mines of the Del. & Hud. Canal Company, employing a number of men to carry on the work. While so engaged he came frequently in contact with James Archbald, Esq., then, and for many years thereafter, General Superintendent for the D. & H. Canal Company. Mr. Archbald with that

rare sagacity and practical judgment which he possessed in so eminent a degree, soon saw in Mr. Clarkson the necessary qualifications to fit him as his assistant in the management of the mining department. The position of mining engineer was offered him by Mr. Archbald, and accepted at a very moderate salary. In this capacity he served the company for some 22 years, Mr. Archbald and himself resigning their respective positions on the 1st day of January, 1854, after which and during the rest of his life he devoted himself for the most part to his private affairs. During the greater part of his life he enjoyed sound and vigorous health, but for the last few years his friends noticed with sadness its gradual decline and at last the end came, and he quietly passed away on Friday morning, the 10th inst., at the ripe age of 77 years, 4 months and 6 days. / Such is an outline, in brief, of the life of Mr. Clarkson. But it may be interesting perhaps and instructive to look a little more closely at the details of the life of our respected friend. His life was very intimately connected with the history of our town. When he first came to Carbondale, our present city of some 10,000 or more inhabitants was little more than a village in its infancy, containing a population of less than 1,000 all told. Its business was correspondingly small; the production of coal in the year 1830 being only some 43,000 tons. This meager amount when compared with the very great increase which it subsequently attained was hardly prophetic except to the far-seeing minds of that day, of what it was destined to become. Mr. Clarkson was identified with it all. In all its struggles for life and its various discouragements in the early years to its final triumph he was an earnest worker and helper. The business was new to him as with others; he was one of its pioneers; they had to learn it by experience. He devoted himself industriously and energetically to the mastering of its details, and made himself familiar by study with the principles of Geology in their application to coal formations. He was naturally well fitted in many important respects for his position. He was characteristically, with his countrymen, careful and cautious to a large degree, and a very economical and prudent manager. Every man under him must be a faithful worker, no idle drones were for a moment; tolerated by him. He, himself was a hard worker, always first on the ground in the morning and the last to leave at night, and it is not too much to say that the great success and commanding position of the D. & H. C. Co. were largely owing to the able management of those two faithful men, James Archibald and James Clarkson, neither of whom could be called a brilliant man, nor were they men of bold and daring enterprise. Their superiority as managers lay in their untiring industry, perseverance and economy, plain, practical common sense and sterling integrity. [emphasis added] They secured the confidence and respect of the employees of the company by their uniform kindness, and the faithful performance of all promises made them. Their word was final and conclusive. These two excellent men worked harmoniously together; they entertained a high mutual respect and their friendship only ended by the death of Mr. Archbald seven years since. Mr. Clarkson remarked to an intimate friend within a few years 'that taking him all in all Mr. Archbald was the best man he ever knew.' They had many traits of character in common, some of which have already been alluded to and there were differences also. Mr. Archbald was constitutionally mild and quiet and reserved. Mr. Clarkson was in the most active period of his life, somewhat austere and stern and unapproachable, excepting to those whom he received to his confidence and esteem. With such he was always very sociable and affable. But as he advanced in life his austerity wore off; time had a mellowing and softening effect on his character. The distinguishing characteristic of Mr. Jas. Clarkson through his whole life, was perhaps his sense of justice. He had a high sense of honor and bitterly denounced meanness and dishonesty in all their forms. He was, too, a man of generous and

tender sympathies, thoroughly loyal to the country of his adoption, and during the whole period of the war of the Rebellion he took a very active interest until its successful close, and no one rejoiced more than he when peace was restored. / Mr. Clarkson was a man of sound judgment, an independent, but slow and careful thinker. Opinions once formed; he adhered to with great tenacity, perhaps indeed to a fault. His mind was always receptive to new truth, and he was much interested in all new discoveries in any department of human knowledge. He took especial interest in the labors and investigations of the distinguished scientists, Darwin, Huxley and that school of philosophers, waiting for and gladly receiving any new truth as it was unfolded. In respect to his religious views we may confine ourselves to the simple statement that he had the most profound belief in the existence of a great first cause of infinite wisdom, power and goodness. He saw the divine attributes in everything in nature. The illimitable universe or the formation of crystal were to him equal proofs positive of an infinite superintending intelligence. As to a distinct individual existence in another life he was not so clear. With him it was a matter of hope rather than of positive belief. In any event he knew all would be for the best and was willing 'to wait the great teacher, death,' to solve all difficulties." / The funeral of Mr. Clarkson was attended at his late residence, on Smith street, on Sunday afternoon, 12th inst. The services were conducted by the Rev. E. D. Bryan of the Presbyterian church. A very large attendance attested the respect and [word missing in original], not only of our own citizens, but that of other towns in the Valley. By direction of President Dickson, of the Del. & Hud. C. Co., a special train was run from the Dickson Works in Scranton to this city, returning after the services. About three hundred prominent citizens from Pittston, Scranton, Providence, Olyphant and Archbald availed themselves of the opportunity afforded. G. R. Love, Esq. of New York city, and family, were also in attendance. / Deceased leaves a considerable estate, but no will. His heirs are his son, Edward Clarkson, and his grand-daughter, Miss Maggie C. Love, both of this city." (*Carbondale Advance*, November 11, 1876, p. 3)

James Dickson and James Clarkson:

Reprinted from the *Cherry Valley, NY, Gazette* in the January 13, 1877 issue of the *Carbondale Advance* on page 3 is an article, written by "W. W. C.," titled "**James Dickson and James Clarkson.**" / A summer or two ago there came to my house for a short visit, two venerable men from Carbondale, in the Lackawanna valley in Pennsylvania, James Dickson and James Clarkson. A letter received a few days since announced the death of the latter, Mr. Clarkson, and it brought to my mind a vivid recollection of these two excellent friends. They were inseparable friends. Mr. Dickson is the father of Thomas, President of the Delaware & Hudson, and he is also of Geo. L., the President of the Dickson Manufacturing Company, one of the largest of the Pennsylvania companies. Both he and his life-long friend Clarkson were natives of Scotland. Both for nearly fifty years had been connected with the Delaware and Hudson Company in its machinery and mining interests and had seen its growth almost from its beginning to its vast proportions. Both had retired from active employment, and with a competency of this world's goods. And now far advanced in life, both of them verging on four score years, with intellectual faculties but little abated, they were tranquilly awaiting the end of their journey. / No aged

husband and wife could have been more devoted to each other. For many a wintry day they had trod with one another, and hand in hand they were descending the hill of life. Every day they met together, and one listened while the other read. So much by way of introduction. One pleasant summer evening the old gentlemen were sitting in my hall communing and perhaps musing as they thought of the long past, / 'Recalling with a sigh / 'Dim recollected pleasures of the days of youth / 'And early love,' when the drone of the Scottish bag-pipes was heard; our fellow-townsmen, James Braik, in his full Highland costume, with a companion came upon the piazza, he playing on his pipes the favorite Scottish air 'The Campbells are coming.' It was a serenade to the old Scottish gentlemen and to them both was extremely gratifying and interesting. As the piper continued to play the airs of Scotland, tears trickled down the cheeks of the old Scotchmen they constantly saying that nothing had touched their feelings more since they had left their native land so many years ago. / The whole scene was the more touching, from the fact that Mr. Braik an Aberdeenshire man in his Highland dress wore the plaid of the Gordons. Mr. Dickson could hardly restrain himself as he recalled the fact that in that garb, as a member of the regiment of the Gordon Highlanders, his father had fought through the continental wars under Wellington, closing his military career at the battle of Waterloo, whose medal he wore. I was an intensely interested spectator, and will not soon forget that summer evening. And now the twain are severed. One has been taken and the other left. But thanks to a good Providence the survivor is a brave Christian soldier. W. W. C." (*Carbondale Advance*, January 13, 1877, p. 3)

In the summer of 1847, Nathaniel Halstead moved to Carbondale.

About the man, we learn from his biographical portrait in PABRLCP (pp. 869-70 + photo of Halstead and his wife, p. 868) that he was born in Clifford, December 26, 1823. "His father owned a saw mill and the youth was proud of the fact that he was considered competent to operate it from boyhood. He also learned carpentering and when he had arrived at his majority he concluded to turn his attention to this branch of business. From 1844 until three years had passed he worked at his trade in his home township, but in the summer of 1847 he located in Carbondale. In the years that followed he took contracts and built many of the best houses in that place. He was his own architect and among other structures erected by him there was the Manville house."

In 1852: Andrew Nicol was hired as a surveyor in the Delaware & Hudson mines.

He saw "the longest service with the Delaware & Hudson Coal [Canal] Company of any man in their employ."

There is a portrait of Andrew Nicol in *Portrait and Biographical Record of Lackawanna County Pennsylvania*, pp. 678-679. In that portrait, there is an account of the death of Andrew Nicol's son, Andrew, who, in September 1889, in the Olyphant mine, in saving the lives of two of his fellow miners, suffered injuries to himself that resulted in his death.

Here is that portrait of Andrew Nicol (the father), who began working for the D&H in 1852 and retired on January 1, 1897:

"ANDREW NICOL has seen the longest service with the Delaware & Hudson Coal Company of any man in their employ, having held one position for the past forty-five years. His business record is one of which he may well be proud and few old citizens of Scranton are more highly esteemed. . . / Born in the lowlands of Scotland, in the parish of New Daily, Ayr, August 20, 1817, Mr. Nicol is a son of John, of the same locality, and grandson of David Nicol, who was a shepherd. The family originated in the highlands and spelled their name McNicol. John Nicol was a carpenter and millwright, being employed in the former capacity by Hon. Thomas F. Kennedy, a nobleman who owned two collieries which had been in operation for over two centuries. He came to America with his son in 1851 and settled in Carbondale, where his demise took place at the age of seventy-six years. His wife, formerly Janet Gray, was the daughter of Andrew Gray, a farmer who lived to be nearly a hundred years old. The Gray family were also natives of Ayr, Scotland, and were of the old Covenanter Presbyterian faith. Mrs. Nicol died when about seventy years old in Carbondale. Of her seven children three are living: Andrew; John, a mechanic in Carbondale, and James, inside foreman at the White Oak mine, Archbald. . . / When thirteen years old our subject started to learn the carpenter's trade in his father's shop. Four years later he went to Glasgow to work on buildings and put in all his spare time, evenings included, in studying draughting and pattern-making. Not satisfied with this he went into the machine shops of an iron company in that city and then was for four years in a foundry in Courtbridge, Lanarkshire, becoming a thorough machinist. He was appointed foreman, but only held the place six months, when he resigned, in order to take up mining and civil engineering, as he believed there was a wider future before him in that field of labor. In two years he became familiar with underground workings and was appointed assistant superintendent, visiting all parts of the mines every day and making reports to his superiors. / In 1851 Mr. Nicol resigned his position and set sail for America on the 'Mary Morris,' the voyage lasting six weeks. Going direct to Albany, where his brother William was foreman in a machine shop, he next proceeded to Carbondale, where he knew a mine foreman, a Mr. Bryden. This gentleman introduced him to the superintendent and Mr. Nicol was given a position as a surveyor in the Delaware & Hudson mines, continuing there twenty years. In December, 1870, he came to Scranton, though still with the old company, which by this time owned mines from Carbondale to Wilkesbarre, and he served them in the various capacities of mining engineer and inside superintendent. Once they sent him to Sheffield, Ill., where he opened a mine and did other surveying for them. In 1870 a law providing for the inspection of the anthracite fields was passed and to the surprise of our subject he was appointed inspector of mines by Gov. John W. Geary. The company who had so long depended upon his services did not want to let him go, but finally gave him leave of absence for six months, at the end of which time he returned to his old work. / In Glasgow Mr. Nicol married Helen Brown, who was born in Maybole, County Ayr, Scotland. . . The marriage of our subject and wife has been blessed by five children. . . . Andrew, the only son, lost his life through his heroism. He was about forty years of age at the time of his death and was his father's assistant as mining engineer in the Olyphant mine. In September 1889, a fire occurred in the mine and in his efforts to extinguish the flames and save the other men he was himself overcome and so badly burned that he lived but three weeks. He carried two men half a mile to the shaft and they were rescued, while he, being the last one to leave, had to face death. He left a wife and

three children to mourn his loss. / Mr. Nicol required four assistants to carry out his plans in the mines. He continued his general supervision of details until January 1, 1897; on that date, in consideration of his long and valuable services to the company, he was placed by them upon the retired list with a pension. He owns property on Delaware Street, between Sanderson and Dickson Avenues, and elsewhere, seven residences in all. He has never lived in a rented house in this country, as he bought one the first week he was in Carbondale. He is a member of the Green Ridge Presbyterian Church, having been one of its founders and organizers. . .: (pp. 678-679)

Many opportunities were made available by the railroads:

“The Railroad. / As we stated in our last, in two years if not sooner, the long-looked for railroad, from the west, will have been finished to Carbondale, and the shrill whistle of the Iron Horse will be heard in our midst. Many, and varied, are the speculations in regard to its results by those concerned in the enterprise, as well as with our citizens. The question which appears most prominent, and which, more immediately concerns our readers at present, is, ‘What is it going to do for Carbondale?’ We answer:--just what Carbondale says it shall do! If the business men of Carbondale say that it shall be the means of building up our city, and increasing its business, it will be so. But if those who have the means at hand, and capital at their command, refuse to invest it in buildings and in manufactories of the various kinds, then we may expect, that it will rather be an injury to our infant city than otherwise, because it will then pass us by to bestow its enlivening influences elsewhere, and upon the community, which is ready and willing to secure it. Let our monied men engage in the enterprise, unloose their purse strings, and invest their capital in building houses of manufacture and commerce, thereby giving employ to the idle portion of our population and inviting the stranger to a location in our midst, and in five years from the present, Carbondale as it is now, would not be known, save in memory and eventually would become one of the greatest cities of Northern Pennsylvania. With water privilege and power, an inexhaustible supply of coal, and all other conveniences, for the business of manufacturing, and an immediate connection with the New York and other markets, we could manufacture Wollen and Cotton fabrics, and furnish them in those markets as cheap as any other manufacturing districts in the world. All that has kept the vast and boundless source of wealth, wrapt up within our own narrow limits for so long a time, has been the want of proper and convenient means of getting our produce to market, and bringing back again in exchange therefor, the products of other lands. This is about to be obviated in the erection of the proposed railroad and we can see no longer any difficulty existing, and no reason why Carbondale should not become an extensive manufacturing district. Situated as we are, at the head of one of the most fertile and wealthy valleys in the world, and which, must soon be traversed throughout its whole length and breadth by the iron rail, we will then be in the possession of facilities for manufacturing and transportation not enjoyed by any other community in the Commonwealth. Let our capitalists then see to it, that this opportunity is not lost. Let there be erected a Wollen and Cotton factory, also a Paper Mill, let the waste places of our city give way to improvements, the huts and shanties now occupied by some our citizens, be converted into large and suitable habitations. Let men who are able, build dwelling houses for the express purpose of selling

again, and the stranger seeking a home will be induced to turn, and dwell with us and the poor and homeless wanderer will find employment and a home with our citizens; the capitalist will find his investments returning double their original in due time, and the community will find new life and vigor infused into its veins and new strength and activity given to business in all its various branches.” (*Lackawanna Citizen*, February 14, 1853, p. 2)

D&H officers and directors, annual report, 1854:

“The annual election for officers of the Delaware and Hudson Canal Company took place, as learn, on the 28th inst., and resulted as follows: *Managers*—John Wurts, Wm. M. Halstead, Silas Holmes, Jacob R. Leroy, Wm. S. Herriman, Charles N. Talbot, Maurice Wurts, Lora Nash, Edward J. Woolsey, William Musgrave, George T. Olyphant, Daniel B. Fearing, Robert Ray. John WURTS, *President*; Wm. Musgrave, *Vice President*; Isaac N. Seymour, *Treasurer*; Gilead A. Smith, *Secretary*. / According to the Report, the profits of the Company for the past year were \$830,972, equal to 11 1/2 per cent. on the capital stock invested. The Coal shipped from Honesdale was 494,209 tons. The Pennsylvania Coal Company also shipped 512,777 tons. The season was 193 working days. The enlargement of the Canal has been completed and the enlarged boats have carried 106 to 140 tons. The stock of coal left unsold when navigation is resumed will be light. The sales of coal have reached \$2,046,033; tolls, \$378,479; profits as above stated, \$830,972. The amount of coal on hand now is \$337,644, against \$391,220 last year.” (*Carbondale Transcript and Lackawanna Journal*, March 31, 1854, p. 2)

"DIVIDEND DECLARED.--The Delaware and Hudson Canal Company have, we are informed, declared a semi annual dividend of 6 per cent, payable on and after Monday, 18th instant." (*Carbondale Transcript and Lackawanna Journal*, December 22, 1854, p. 2)

Death of Maurice Wurts:

1854: December 29: death of Maurice Wurts at Philadelphia. *Mathews*, p. 245: “He had been identified with the company for more than thirty years, and with the great project from its inception, and to him more than to any other man its wonderful success was due.”

Winter* shutdown of Gravity Railroad:

“The Cars on the Del. & Hudson Company’s works will stop running on Wednesday, 28th inst., and will not resume operations before the middle of April. We understand the Company have a vast amount of repairs and alterations to make on their road, contemplated for some time past; as well as a more than sufficient body of coal at Honesdale and Waymart, [emphasis added] with what will be mined next summer, to supply the full capacity of the Canal for transportation.” (*Carbondale Transcript and Lackawanna Journal*, February 23, 1855, p. 3)

*Winters in North America and Europe in the period 1300 to 1850, a period of time known as the Little Ice Age, were frequently colder and stormier than they are at present.

More coal lands purchased:

--October 1855: 159 acres in Nathan Wade tract for \$20,140

--May 1857: 174 acres of land in Blakely from Colonel Johnson for \$25,000

--October 26, 1858: the Rice and Mead lots in Providence, 114 acres, @\$175 per acre

--1859: 212 acres adjoining the Rice and Mead lots, @ \$175 per acre--July 19, 1859: President Olyphant and a member of the Talbot family sold the company 3,500 acres of land in Luzerne, Wayne, and Susquehanna counties (the PA legislature on March 12, 1859 enacted a measure giving the D&H the right to purchase and hold 3,500 acres of land in addition to the 5,000 acres originally authorized).

Gravity Railroad opens for the season in April 1856:

"The cars on the Del. & Hudson railroad commenced making trips yesterday. It looks like old times to see our laborers again all actively engaged." (*Carbondale Transcript and Lackawanna Journal*, April 25, 1856, p. 2)

Sinking a shaft near the cottage of S. R. Meredith:

"The Lackawanna Railroad company are boring, preparatory to sinking a shaft, on the west side of the Plank-Road, near the Cottage of S. R. Meredith, Esq." (*Carbondale Transcript, and Lackawanna Journal*, April 25, 1856, p. 2)

D&H Vice President Musgrave dies:

"**DEATH OF WM. MUSGRAVE.**—This gentleman, Vice President of the Del. & Hud. Canal Co., and one of the most respectable citizens of New York, died in that city, on the 17th of April, at the age of 56. He has filled the position of Vice President of the D. & H. Canal Co. since 1850, and has just been re-elected. He was one of the most efficient officers of the Company, and as a man was high in the esteem of all who knew him." (*Carbondale Transcript and Lackawanna Journal*, May 9, 1856, p. 2)

Coal deposits on Gibson property being examined:

"**VALUABLE COAL LANDS.**—James Clarkson, Esq., Mining Engineer, is now engaged in examining the coal deposits upon the Gibson property—the old Wilbur and DuBois lands,—a property containing 1,800 acres, underlaying almost the whole of which, are the finest coal seams in the valley. These lands were purchased last summer by Mr. Gibson of Philadelphia, with a view of at once making them productive; and we are not alone in the opinion that in a comparatively short interval of time, a thriving mining town [later known as Jermyn] will spring up between this City and Archbald. Let a few such men as Mr. Gibson invest their resources in the Lack. and Lanesboro' railroad, and it must go ahead." (*Carbondale Transcript and Lackawanna Journal*, May 16, 1856, p.2)

Rollin Manville began service of the D&H in January 1856 as assistant superintendent and when work on the 1859 configuration began in April 1857, Superintendent Manville was placed in charge as constructing engineer:

“ . . Mr. Manville was born at Whitehall, Washington county, N. Y., November 6th, 1824. He entered the railroad service as rodman with the surveying party in charge of the construction of the Saratoga & Washington R. R. in July, 1847, and continued in the service of the same road until October, 1849, when he was appointed Division Engineer of the New York & Harlem R. R. His first work in Pennsylvania began when he was employed to survey and make plans for a railroad from Wilkes-Barre to the Delaware River at Water Gap. The survey was made during the summer of 1853, but the project was abandoned after the plans had been prepared. In September of the same year Mr. Manville returned to New York and was appointed constructing engineer of the Flushing and Hunter's Point Railroad. The road was completed in June, 1855, and in January, 1856, Mr. Manville entered the service of the Delaware & Hudson canal company as assistant superintendent, taking entire charge of the gravity railroad from Waymart to Honesdale, the coal pockets, and the canal docks, and the entire plant pertaining to the trans-shipment of coal by boat. During that year the system of transferring coal from cars to coal boats was subjected to many changes and the cost of trans-shipment was materially lessened not only, but the loading of canal boats under the new methods was made comparatively easy. The improvements made under the direction of Supt. Manville at Honesdale were in line with the changes contemplated in the entire gravity railroad system, and when the work of constructing the present gravity railroad was commenced in April, 1857, Mr. Manville was placed in charge as constructing engineer. [emphasis added] Nowhere in the world has the skillful engineer accomplished so economically such a feat in railroad building as the system of inclines over which millions of tons of anthracite have been transported out of the valley of the Lackawanna over the Moosic range into the valley formed by the tributaries of the Delaware. / The problem which puzzled the coal producers in the anthracite region was how are we to secure transportation to the seaboard and the markets east and west for the product of our mines. This was one of the important questions that Mr. Manville was called upon to grapple with and to his practical foresight is largely due the fact that the Delaware & Hudson Canal Co., own and control the leading outlets from the northeastern coal fields of Pennsylvania and possess shipping facilities that are not surpassed by any carrying corporation in the United States. / **What he Accomplished.** / Under Mr. Manville's administration the valley road was constructed, the Union coal company's line purchased; the arrangement under which the freight and passenger trains of the Delaware & Hudson are whisked over the Erie's branch; the Albany and Susquehanna, and Renneselear [sic] & Saratoga acquired, the connecting link between Lanesboro and Nineveh built; the Canada outlet constructed; the extension of the valley road to

Wilkes-Barre completed and the Farview switchback, which has made the railroad famous the country over, are among the evidences of what was accomplished during the five and thirty years that he served as railroad superintendent of this great coal and railroad corporation. Such a record of a busy life few men even in this age of phenomenal progress, are privileged to leave behind when called to leave the sphere in which their lives have been spent . . . “ (*Carbondale Leader*, June 25, 1891, p. 4)

Regular trips on the Gravity Railroad to begin on April 1; with the completion of the 1859 configuration of the Gravity Railroad a million tons per year can be sent to market.

“The cars on the Delaware and Hudson Railroad will commence their regular trips the first of April, which is to our community the most cheering news no doubt, we could possibly apprise them of. Owing to the inclemency of the past winter, the operations here have been suspended for a much longer period than usual. This unavoidable circumstance has produced among the laboring part of our people, if not absolute want, in some instances at least, very real inconvenience and inability to purchase their usual and necessary supplies of the requirements of life. All the repairs will be completed before the first proximo, and the greatest exertions, we understand will be made by the Company to get to market the present season all the Coal they can possibly transport over the road. No better opportunity offers to Miners and Laborers for constant employment and remunerative wages than is here presented. In addition to the heretofore vast outlay of the Del. & Hud. Company in the promotion of enterprise, they are now erecting at No. 2 Shaft a screen to prepare the finer coals: at Archbald the mining operations are to be increased two-fold, and a determination is to send from this end of the Lackawanna Valley the present season 600,000 tons. Next year, the new Road now constructing from this point over the Moosic Mountain will be completed, and its increased facilities will enable this Company to send from here a million of tuns annually. [emphasis added] This, from what we have already seen of the enterprise enlisted in developing our hidden wealth, will be accomplished. Why then despond as to our future? We are progressing slowly but surely—the skies are bright—our prosperity is of the substantial not the effervescent sort, and therefore should we be less prone to dissatisfaction. We say, then, there is no better field for the laborer than our mining operations afford.” (*Carbondale Transcript, and Lackawanna Journal*, March 19, 1857, p. 2)

The D&HCCo and the PCC have made a satisfactory settlement:

“It is reported that the Delaware and Hudson Canal Company and the Pennsylvania Coal Company *have* made an amicable and satisfactory settlement of all the points in controversy between them. It may be that this settlement will put an end to the project of constructing a Railroad from Hawley to intersect the New York and Erie.—*Honesdale Democrat.*” (*Carbondale Transcript, and Lackawanna Journal*, April 9, 1857, p. 2)

David Thomas killed on Blakely Railroad:

“**ACCIDENT.**—A lad of the name of David Thomas, was run over by the cars and killed on the Blakely railroad Monday afternoon. / Let this be a warning to boys who are in the habit of riding on the cars, and getting on and off when they are in motion. More or less boys are killed and maimed every season in consequence of this practice; and in witnessing the carelessness and

recklessness of these boys, the wonder is, that accidents of the kind are not of more frequent occurrence than they are: Boys, keep away from the cars, and from the rail-roads! You have no business there, and it is no place for you. By taking this advice, many of you will avoid these shocking deaths, and your parents and friends will not have to mourn over your untimely end.” (*The Advance*, October 17, 1857, p. 2)

Working six days a week:

"The Del. & Hud. Co. are mining and running coal six days a week, and are doing their usual amount of business. They ceased work on Saturday's only twice, and have recommenced running coal as usual." (*The Advance*, November 28, 1857, p. 2)

4522

1846 Mine Cave In: January 12, 1846

Site: Old No. 1 Shaft (in No. 1 and 2 Drifts), near Pike and Sand Streets; 60 men trapped, 15 lives lost. Roof fall covering nearly 40 acres; some of the bodies were never found, one was found by a miner working in the No. 1 operation in the 1920s. Alexander Bryden rescued two miners: Mine Foreman John Hosie (brought out after being trapped for more than 60 hours) and Dennis O'Farrell (leg broken by a large piece of coal violently shot from a pillar by the great pressure of the strata overhead).

The Basic Texts:

1. A reprint of the obituary of Alexander Bryden that was originally published in the August 25, 1854 issue of the *Carbondale Transcript and Lackawanna Journal* (p. 2), and reprinted on page 3 of the March 8, 1873 issue of the *Carbondale Advance*. Included in that obituary is a description of the 1846 mine cave-in that was written by the Henry S. Randell, Esq. and published in the August 12, 1846 issue of the *Courtland (N. Y.) Democrat*. Here is that obituary, preceded by the lead-in that was provided by *Carbondale Advance* in 1873: "We copy the following by request, but very cheerfully, from the *Carbondale Transcript* of August 25th, 1854. It will interest our readers, as a just tribute to a former excellent citizen, and as an important and interesting part of the local history of our town: / **DIED--** / In this city, on Sunday, 20th instant, of dysentery, ALEXANDER BRYDEN, Esq., in the 55th year of his age. / Mr. Bryden was born in Ayrshire, Scotland. He made this country his home, attracted more by an ardent admiration of the Republican institutions of our government, than by any desire of wealth or distinction or the mere love of adventure, which actuates many to such untrodden shores. / The prominent characteristics of the man, while living, were a highly cultivated social nature; an extreme sensitiveness to the sufferings of others; an almost reckless unselfishness in the hour of danger; an unswerving regard for truth, amounting nearly to idolatry, and an inflexible sense of right and justice--scorning ever all artifice and indirection. Overlaying and adorning these qualities was that charm of modesty, ever accompanying true merit, and which, while it rendered him the most gentle and unassuming of men, disarmed even malice itself of the desire to sully, with the

faintest breath, the spotless purity of his reputation. / In his business relations with the Delaware and Hudson Canal Company as Superintendent of the mines, he is understood to have given perfect satisfaction, as well as to all those under his control and superintendence. / His funeral was attended by a very large concourse of our citizens, by his brethren of the Order of Odd Fellows, by the entire city Fire Department (he being Chief Engineer), and by many sorrowing friends from the adjacent towns. In his death this community has met with an irreparable loss: one which may well be regarded as a public calamity. The workingmen have buried a friend equally ready to counsel and assist; but his family have suffered a deeper bereavement--they weep a husband and father 'gone to that bourne whence no traveler returns,' and have a just claim upon the sympathy of the whole community. / As the best practical commentary which it is in our power to make upon the character of our deceased friend, we copy from a number of the *Courtland* (N. Y.) *Democrat* published August 12th, 1846, a description written by Henry S. Randall, Esq., of an incident in the life of Alexander Bryden which can never be effaced from the memory of our citizens, until they, in their turn shall have followed him to his last resting place. /

* * * * *

'A point in the mines had begun to 'work,' in miners' phrase, that is, to crack and give indications of an approaching 'fall,' some days prior to the catastrophe. But it ultimately came sooner, and extended over a much larger space, than was anticipated. Bryden was at the pump-house, and observing an unusual commotion, at the mouth of the mines, proceeded to ascertain the cause of it. Men 'whispered with white lips' of some terrible disaster, but no one could give him any intelligible account of it. He entered one of the galleries, and soon met three men who informed him that a portion of the mines had fallen in, and that they had left behind sixteen or eighteen men, who were already crushed, or shut out forever from the light of day. They besought him to retire, as there was no hope or possibility of rescuing their comrades. The gallant Scotchman hesitated not one instant. He flew along the passages, the roar and crash of the splitting and grinding rocks every moment sounding louder and nearer to his ears. He reached the verge of the 'fall.' The superincumbent mountain was heaving and rending, as if an earthquake were tearing its rocky strata. Vast masses of slate were detaching themselves, and falling into the passages, with reports like the loudest thunder. Into these choked passages, amid the falling rocks, the noble-hearted Scotchman rushed on. The passage is entirely closed--no; --the huge slabs have fallen so as to leave a narrow opening in the angle formed by an angle of the floor and one of the sides of the gallery. On his hands and knees he creeps on. Now the opening has diminished so that he absolutely forces his way along with no hands and feet, lying nearly prostrate on his face! / About a mile from the mouth of the mine, he found the eighteen men in a gallery or heading where there was solid coal all about them, and oh! joy of joys! his own son [Andrew, age 19 at the time; he later served, for more than 50 years, as a superintendent for the Pennsylvania Coal Company in the Pittston area; he died in Carbondale in 1901 at the age of 74] was among them! Bryden was on the point of leading out the men, when he learned that another lay wounded in a chamber four or five hundred feet off, in the most dangerous part of the 'fall.' Was it his brother?--was it his bosom friend?--was it a wealthy or influential man, who might advance his rescuer's interest, who lay there helpless, to die a miserable death? He was a common laborer--a poor Irishman. Mr. Bryden had satisfied, nay more than satisfied, the calls of duty and humanity. If the love of praise had stimulated him, (which it did not,) he had earned

enough. If the father had felt a premonition that he might be struggling for his child, that child was found. The man was badly wounded, and might only be carried out to die. Was he not, bound now to take heed for his own safety--to lead and guard his own recovered son back through the perilous path? Not thus did that great heart commune with itself. With a word of indignant censure to the men for not bearing their wounded comrade with themselves to the gallery where found them, [emphasis added] he pointed out their path, bade them escape, and then turning back, entered a path more perilous and difficult than his preceding one. He nears the chamber. A cry from the wounded and prostrate man, who descried his advancing light, brings him to his side. Mangled and helpless, he could not stand, and shrieked with pain as he was lifted up. When placed on Bryden's back, he had not even strength to hold himself on. The former, placing the flaccid arms of the wounded man around his neck, and crossing on his breast, grasped them with one hand, his miner's lamp with the other, and thus commenced retracing his steps! For rods he bore him on his hands and knees! When the rocks were too low even for this, and could not be clambered over, he partially dragged him, and the man, who was now somewhat revived, partially assisted himself! Thus through perils which no man can appreciate, who has not strode through those gloomy caverns, he bore him a full mile--bore him to the light of day and to safety! What is the bravery of the warrior, excited by the hope of glory, / '---the neighing steed and the shrill trump, / The spirit-stirring drum, and the ear-piercing fife, / The royal banner; and all quality, / Pride, pomp, and circumstance of glorious war,' / to the disinterested heroism of this act! The Romans awarded a *civic crown*, the highest military reward, to him who saved the life of a citizen. He who bore it took his seat next the Senators in the theatre, and those haughty warriors and sages rose up, to honor him as he entered. Shall no testimonial perpetuate the memory of an act by which the lives of *eighteen* American citizens were saved from peril more imminent than that of the battle field, or any of those ordinary casualties, where man risks his life for his fellow man? * * * * * His form, though well knit and sinewy, betokens no extraordinary physical power. A placid gray eye, a well arched nose, curling locks of light brown escaping under his Scotch cap--intonations of voice, modulated to 'more than woman's mildness'--a reserved, modest, and unassuming demeanor, are external traits which would strike any observer; and perhaps few could see, under this unpretending exterior, the man who could do and dare what he has done and dared! But there is a firmness in those gentle tones, a deep earnestness and truthfulness--a quiet but unwavering decision--an utter merging of self--a gushing tenderness of feeling, which pervade the whole man, which, would lead the deeper analyst of character, to expect the legitimate manifestations of these united traits. A high sense of duty and overflowing humanity, it was, and was alone, which prompted his heart and his hand in that dreadful hour.' " (*Carbondale Advance*, March 8, 1873, p. 3)

- In September 1899, P. S. Joslin contributed a series of articles to the *Carbondale Leader* on the early history of Carbondale. In the article in that series titled "**CARBONDALE IN ITS I[N]FANCY. / A Series of Articles on the Early Days of the Anthracite City by One of Its Pioneers,**" published on September 16, 1899, p. 2, Joslin presents biographical sketches of Alexander Bryden and John Hosie, co-superintendents of the D&H mines. Here is P. S. Joslin's biographical portrait of Alexander Bryden: "Alexander Bryden was born in Daily Parish, Ayrshire, Scotland March 6, 1799. He was brought up about the coal mines of Ayrshire and became a coal miner, shaft sinker and mine foreman. / In the year 1836 he leased a coal work upon the Polquhirter estate at New Cumrock, Ayrshire. He also leased a coal work upon the Downieston estate, at Patna, which was drowned out by the River Doon breaking into it. / In the year 1842 he emigrated to America, and came direct to Carbondale. In July of that year, work was very dull, and hard to get about the mines, and he took such work as he could get. His first work for the Delaware & Hudson Canal company was with Hugh Brown, foreman of day laborers, but very soon he was given charge of the pumps which drained the water from the deep mines. / In March 1843, he was appointed mine foreman, to take the place of Archibald Law, who was permanently disabled by a fall of roof and coal.

[The e-mail given below was received from out of the blue on the CHS&M webpage e-mail on 09-01-09:

September 1, 2009

MALCOLM LAW
7686 FORRESTAL RD
SAN DIEGO, CA 92120

Daytime Phone : 619 265 0950

Evening Phone : 619 265 0950

Email : MALJOYL@COX.NET

I am the great-great grandson of Archbald Law born in Wanlockhead, Scotland in 1799. In Scotland he trained and worked as a mining engineer. In 1830, he emigrated to the United States and settled in Carbondale, Pa. and was employed by the Delaware and Hudson Coal Company as a mining engineer. Mr. Law put in the first underground mines for the D&H Coal Company replacing strip mining then in vogue with a vertical shaft. During an inspection of mine pumps Mr. Law was injured by a fall of rock leaving him in considerable pain and with paralysis of his lower limbs. Mr. John Wurtz, President of the D&H Coal Company called to see him and had a wagon especially built for him and had him transported to

New York City to see Dr. Valentine Mott. Unfortunately Dr. Mott was unable to relieve him of his pain and suffering. Mr. Law died in June 1848. Mr. Law's innovative engineering transforming anthracite mining methods was commemorated with a monument located in Carbondale on the occasion of the fiftieth anniversary of the city of Carbondale. (I have a picture of the monument on my computer)

[SRP reply]

09-01-09

Dear Mr. Law:

We are very pleased to have the information about Archibald Law, very pleased indeed. Thank you.

The monument of which you speak still stands on the site of the first deep underground anthracite mine in America, and we are very proud to have such an important historic site in Carbondale.

We would be very pleased to have an electronic copy of the photo of which you speak.

[Mr. Law sent a copy of the photo he has. Here is a portion of my reply of 09-02-09 to him: "The monument in the photo that you have (in the form of an obelisk) is located in Carbondale's Gravity Park. It is a commemorative monument that was erected in the 20th century by the D&H (after the Gravity Railroad closed in 1899) in the middle of what was formerly Plane No. 1 on the Gravity Railroad. / It is not the monument, erected in 1901, when the City of Carbondale as an incorporated entity was 50 years old, that marks the site of the first deep underground anthracite mine in America (which was opened in 1831). That is the monument in the two photos that I sent to you--located just west of the 7th Avenue crossing of the D&H, on Carbondale's West Side.]

In Carbondale's oldest cemetery, Maplewood Cemetery, eleven members of the Law family are interred. Attached is a copy of the relevant page from the interment records.

The cause of death, in the interment records for Archibald Law, who died on July 4, 1848 at age 51, is given as "Hurt in Mines." The Widow Law" in the interment records, who died at the age of 79 on February 7, 1876 is probably the widow of Archibald Law. Her cause of death is given as "old age - pneumonia."

Sincerely,

S. Robert Powell]

I sent a copy of the above e-mail to John Buberniak, who included the following information in his reply of 09-01-09:

"Was the chief engineer in Scotland of the Duke of Buccleuh, and he came to this country on the invitation of the Delaware & Hudson Railroad to take charge of their extensive mining operations. This was in 1830, when he was thirty-one years of age, and to him is due the praise for the introduction of the present method."

Most interestingly, Alexander Bryden, like Archibald Law, was a "shaft sinker and mine foreman" in Scotland before he emigrated to the United States: ". . . Alexander Bryden was born in Daily Parish, Ayrshire, Scotland March 6, 1799. He was brought up about the coal mines of Ayrshire and became a coal miner, shaft sinker and mine foreman. / In the year 1836 he leased a coal work upon the Polquhirter estate at New Cumrock, Ayrshire. He also leased a coal work upon the Downieston estate, at Patna, which was drowned out by the River Doon breaking into it. / In the year 1842 he emigrated to America, and came direct to Carbondale. . ."

He continued in that position until the beginning of the year 1852, when he removed to Pittston, to take charge of the Pittston Coal company's work at that place. He held that position until the first of January, 1854, when he was appointed mining superintendent of the Delaware & Hudson canal company's mines, which position he held until his death on the 20th of August, 1854. / At his death he left a widow and twelve children. Mrs. Bryden and four of the children have since died. The children still living, in order of their ages, are Andrew, Catherine, widow of William Law, Adam, William, Mary, Mrs. Edward Inch, Margaret, Mrs. Martin Holdich, Janet, Mrs. O. P. Miller and John A. / We do not know what his education advantages were in Scotland, but here he exhibited a literary turn of mind, and in order to avail himself of the benefit of the best literature and history of current events, he with the aid of Mr. Clarkson, succeeded in founding a circulating library of the foreign and domestic quarterly and monthly magazines. He interested a large number of the miners and mechanics in the enterprise, by which means, at a small expense to each, every one had access to all the current literature of the day. / One of the events which will keep in memory

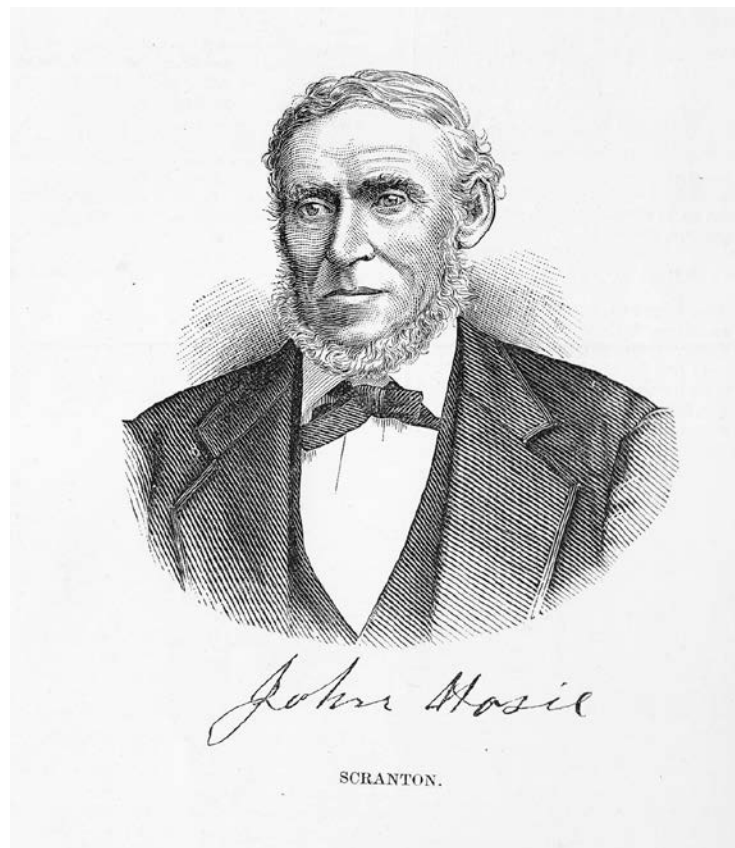
his fearlessness in time of danger is that fatal fall of rock and coal in the mines here on the 12th day of January, 1846. About forty acres of the roof gave way, crushing props and pillars. The men had just gone into work, and fourteen were crushed to death, one of the mine superintendents, John Hosie, was entombed with the others. Mr. Bryden did not relax his efforts to relieve any one who might be living. After about forty-eight hours, Mr. Hosie came within hearing distance. Mr. Bryden had to crawl through a very narrow opening and over fallen coal and rock to get to him. He carried him, when he could and drew him over places where they could not stand, until they reached the outside. Mr. Bryden stated that after so long a time had elapsed since the fall, he could hear the cracking of the coal and rock, showing that it was still settling over them. / Next week we expect to give a vivid account of that disaster written by Andrew Bryden, a son of Alexander Bryden, who was also in the mine at the time. . ." (*Carbondale Leader*, September 16, 1899, p. 2)

In the biographical portrait of John Hosie that is given in 1880 (p. 438J; written and published during Hosie's lifetime) is the following description of John Hosie's entrapment and escape from the 1846 mine cave in: "January 12th, 1846, occurred a most thrilling and memorable event in the life of Mr. Hosie, which put to the full test the indomitable will and magnificent pluck of the man, so strongly shadowed forth in the boy, and which at the time was heralded to the farthest limits of civilization. About 8 o'clock in the morning of that day he went into Mine No 2 level at Carbondale. He had been in the mine less than an hour when about forty acres of the overhanging rocks and earth caved in. He was alone and very near the center of this fall. Fifteen miners in other parts of the mine were instantly killed by the concussion of the air. [emphasis added] Mr. Hosie was saved from instant death by the refuse coal which is ordinarily left on the bottom of the mine. As it was he was pressed between the fallen rocks and the bottom of the mine, with barely space left for his prostrate body. In utter darkness, with nothing but his bare hands to work with, for twenty-four hours, every one of which seemed an age, he dug for his life, throwing behind him the fallen debris and refuse coal upon which the fallen mass rested. His fingers were worn to the bone and still bear the marks of the terrible struggle. At length he reached a place where he could stand up, only to find, however, he was still inside the fall. He attempted to reach the air shaft, but did not succeed. It finally occurred to him that by following the break in the overhanging rocks made next to the line of solid coal he might work his way to the main entrance. Following up this thought he finally, after having been literally buried in this living tomb for forty-eight hours, effected his escape. He had been given up for dead, as it was known he was in the very center of the fall, having been seen there by a mule driver as he was passing along just previous to the fall. He met a party of miners before reaching the entrance, who had entered the mine for the purpose of digging for his body. Instead, they found a pretty lively corpse in the person of Mr. Hosie himself approaching them. The news of his escape sent a thrill of joy throughout the country. It would not be in the power of pen to describe the feelings of the young wife, who had given her husband up for lost, when the glad tidings were borne to her that he was yet alive."

More on John Hosie:

John Hosie, born June 3, 1812 in Sterlingshire, Scotland, worked with James Archbald and the D&H beginning in 1843, when “he engaged, under James Archbald, in the management of the Delaware and Hudson Canal Company’s Railroad from Carbondale to Honesdale, and during the two years he was thus employed he repaired the masonry on the company’s canal. In 1845 he accepted the position of assistant superintendent, under James Archbald, of the Delaware and Hudson coal mines at Carbondale.” (1880, p. 438J).

Hosie worked for the D&H until 1850, at which point he became general superintendent for the Pennsylvania Coal Company, taking charge of their mines at Pittston and Dunmore, a position which he filled until 1854. In 1872 John Hosie built the Fairlawn colliery at Scranton, and operated it until his death (May 7, 1881), at which time his sons took over the operation of the colliery. In 1877 he became a partner in the Pierce Coal Company at Winton. In 1880 he was that company’s general manager. The earthly remains of John Hosie and his wife, Julia A. Hosie (June 6, 1822—November 4, 1879) are interred in Dunmore Cemetery, Dunmore, PA. Given below is the likeness of John Hosie that accompanies his biographical portrait in 1880:



2. **"The Mine Disaster of 1846.** / Many of our older citizens remember very distinctly the particulars of that terrible calamity in our mines in the year 1846. But others, embracing a large majority of our present residents, are not acquainted with the details of the catastrophe. / As a matter of interest to all, we again spread out the whole matter in our columns. We commenced last week, with the sketch of A. Bryden Esq., written soon after by Hon. Henry S. Randall; we follow this the present week by the sketch written by Rev. Henry A. Rowland, then Pastor of the Presbyterian church in Honesdale, and the account of it given in the *Carbondale Democrat* at the time. By these combined, a condensed and reliable account of the catastrophe will be obtained, and in a good shape for preservation." (*Carbondale Advance*, March 15, 1873, p. 3) Here are the two articles referenced in this cover article from the March 15, 1873 issue of the *Carbondale Advance* that were published in that same issue of the *Carbondale Advance*:

3. Account of the accident that was originally published in the *Carbondale Democrat* on January 16, 1846 (four days after the cave in; SRP: Do we have that issue of the *Carbondale Democrat*? The original article was removed from the bound volume by someone before the bound volumes came under the care of the Historical Society). Here is the original account of the accident from the January 16, 1846 *Carbondale Democrat*: **"DREADFUL CATASTROPHE!!! --Upwards of SIXTY Persons buried alive! FOURTEEN still missing!** -- About nine o'clock, on Monday morning, an accident occurred in the mines, in our village, more appalling and dreadful than any that have before taken place here, or that has come within the knowledge of the eldest among us. The roof the mines fell in almost simultaneously, to the extent of a half mile, or upwards in length, and about forty rods in width--burying in its fall, or shutting up in subterranean caverns, about 60 workmen--Of these 46 have escaped through the various chambers, some with little injury, others severely wounded, but sad to relate, *fourteen*--dead or alive--are still imprisoned in the bowels of the earth. / The No. 1 mines had been 'working' (i.e., the pillars had been groaning, or cracking, under the weight of the mountain that rested upon them,) for some days, but as the phenomenon was not new, nothing serious was apprehended from it. The effect of such 'workings' is generally inconsiderable, extending but a few yards and producing no other danger or inconvenience, than what is occasioned by the falling of pieces of slate, of which even there is sufficient warning, to enable one to escape from its reach. / On Monday morning of the present week, Mr. Clarkson, the mining Engineer, went into the mines, before the hour of commencing work, to examine their condition. Though all seemed quiet, to increase the safety, some additional props with roofings were ordered to be put up. The workmen had been but a short time in the mines, when a heavy cloud of smoke, and dust, were seen rushing out of mouths of that and the adjoining mine, attended with a current of air sufficient to remove cars, large stones &c. with its force. Workmen, that were then entering, were raised from their feet, and thrown violently backward against pillars and other objects, many of them receiving severe wounds. / A driver, Patrick Clark, had his horse instantly killed, and he was thrown so violently against the cars, as to break several bones, and cause his death the next day. Hugh Fitzpatrick and John M'Kale were severely hurt in the same manner. Dennis Farrell, was nearly killed by stones falling upon him. His brother to relieve him ran for an iron bar, and has not been seen since--he has probably perished. Mr. F. was afterwards extricated from the stones

by two other men, and placed against the side of the mine, where being wholly disabled, he was left, while they ran for their lives, from under the falling mass. He was afterwards brought out by Mr. Bryden, Assistant Engineer, though at great peril to himself. Mr. Bryden deserves great credit for his courageous and energetic efforts to save those who were involved in this calamity. / Mr. John Hosie, an overseer, was for 48 hours supposed to have been lost--but, after encountering numberless dangers, and difficulties, was enabled to work his way out. An account of his adventures, while it would be of much interest, we are obliged to omit. Having been but recently married, the feelings of his wife during the time, may be imagined but cannot be described. / The following named persons are still confined to the mines. It may be that some of them are still living, but there being little hopes of reaching them in less time than one week, but a faint prospect appears of recovering them alive. Their names are, Patrick Leonard, Henry Moore, James Magrath, Patrick Walker, Patrick Mitchell, John Brennan, Peter Cawley, Anthony Walsh, Mark Brennan, William Clines, Michael Tolan, Henry Devany, John Farrell, and Ebenezer Williams; the first thirteen are Irishmen, the latter a Welchman. All leave families, dependent upon their labor. Patrick Walker, John Brennan and Patrick Clarke, were the support of widowed mothers. / The Company have placed different sets of hands on the roads leading to where these unfortunate men are supposed to be, who labor with unremitting energy night and day to effect a passage through the ponderous masses of slate and earth. No greater efforts for their recovery, could perhaps be made than are making--every avenue of access has been explored, and the most efficient means adopted to effect the object."

4. The *Carbondale Democrat* article from January 16, 1846 was also republished, with an editor's introduction, in the *Carbondale Leader* of Tuesday, January 5, 1886 (p. 4). Here is the introduction to the *Leader's* reprint (1886) of the *Carbondale Democrat's* January 16, 1846 article: "Commenting on the recent terrible mine accident at Nanticoke, the *Scranton Truth* refers incidentally to a similar catastrophe which occurred in Carbondale many years ago. The *Truth* fixes the time in 'the winter of 1843,' which is an error of three years.[The *Truth* was perhaps relying on either (1) H. Hollister's *History of the Lackawanna Valley*, published in 1875, in which Dr. Hollister erroneously reports (p. 364) that "During the winter of 1843 or '44, a portion of the Delaware and Hudson Canal Company's mines, at Carbondale, 'fell in' upon the workmen. . ." or (2) J. A. Clark's *The Wyoming Valley, Upper Waters of the Susquehanna, and the Lackawanna Coal-Region, including Views of the Natural Scenery of Northern Pennsylvania, from the Indian Occupancy to the year 1875* (1875: J. A. Clark, publisher, Scranton, PA) in which, in his 28th chapter, "Delaware and Hudson Canal Company (pp. 106-154), Clark, like Hollister, both published in 1875, incorrectly gives the date of the great Carbondale mine cave-in as 1843-44: ". . . But an unfortunate event occurred during the winter of 1843-44, by which sixteen lives were lost. The roof of a portion of the mines. . ." (p. 143). Interestingly, the body of Clark's account (pp. 143-44) is an exact copy, fully acknowledged, from Hollister (pp. 364-66). Hollister's account of the accident, it should be noted, although interesting to read, is more imagined than empirically observed, and somewhat melodramatic in its presentation: ". . . Others, without water, food, or light, shut in from the world forever by the appalling wall of rock, coal, and slate around them, while breathing the scanty air, and suffering in body and mind, agony the

most intense, clenched tighter their picks, and wildly labored one night that knew no day, until exhausted they sank, and died in the darkness of their rocky sepulchers, with no sweet voice to soothe, no kind angel to cool the burning temples, or catch the whispers from the spirit land. " (p. 144).] It occurred January 12, 1846. Inasmuch as this accident (which was at that time the most fatal in its results of any similar one in this country) is often spoken of, and many inquiries are made as to the particulars, and especially as we hear and read occasionally incorrect accounts of it, we have thought best to draw upon Esquire Yarrington's files (which he has courteously permitted) and reproduce the statement published a few days after the occurrence. Its perusal will bring to the minds of our older citizens (as it has to that of the writer) in a vivid manner, the terrible agony and suspense which our whole population endured during the time that efforts were made to relieve the entombed miners, and the inexpressible joy when the news came that Mr. Hosie had been rescued. / The following is the account taken from the *Carbondale Democrat*, of Jan. 16, 1846, published by Joslin & Benedict:-- . . ."

5. Account of the cave-in that was written, January 15, 1846 (three days after the cave in) by Rev. Henry A. Rowland, pastor of the Presbyterian Church in Honesdale at the time of the cave-in, and originally published in the *N. Y. Commercial Advertiser* (and reprinted in the March 5 1873 issue of the *Wilkes-Barre Record* from a copy of the article in the *N. Y. Commercial Advertiser* that was included in a scrap book in the possession of Ziba Bennett, Esq.). Here is the complete article from the March 5, 1873 issue of the *Wilkes-Barre Record*, as reprinted in the March 15, 1873 issue, p. 1, of the *Carbondale Advance*: "The *Wilkes-Barre Record* of March 5th says: 'We are permitted to make the following extract from a scrap book in the possession of Ziba Bennett, Esq. Most of our readers do not know, or have forgotten about the cave in at Carbondale, in 1846--the most serious disaster in the coal mines of this region until Avondale. Mr. John Hosie, the hero of the following narrative, called at our office last week, and gave a thrilling description of his difficulties and his feelings while working his way out of the mine. He is now a healthy, vigorous man, with apparently many years of life before him. His adventure at Carbondale, did not frighten him away from the mines, as he is still engaged in the coal business.' / (From the *N. Y. Commercial Advertiser*.) / **LIVING BURIAL AND ESCAPE.** / For the subjoined graphic account of the remarkable disaster a[t] Carbondale, and the almost miraculous escape of a man who was buried in the crushed mines, we are indebted to the Rev. Mr. Rowland, pastor of the Presbyterian Church at Honesdale, but formerly of the Pearl Street Church in this city. The narrative is equally interesting and extraordinary: / 'Honesdale, Jan. 15, 1846. / On Monday morning last, about nine o'clock, an accident occurred in the coal mines of the Delaware & Hudson Canal Company, at Carbondale, which has produced considerable excitement in the community. A large portion of the hill or mountain into which the mines extend, following the law of gravity, suddenly descended on the honey-comb cavities within its bosom, burying all the unfortunate victims within its reach. Very many acres descended in a mass; and so great was the pressure of the atmosphere, occasioned by this descent as to shoot out from the mouth of one of the mines, as from the mouth of a cannon, a train of cars with a horse and a boy, throwing them to considerable distance. Think of a bellows moved by mountain power, and you form a very correct idea of the blast. Painful to relate, fifteen individuals were

beneath the descending mass, only one of whom has had the good fortune to escape; and his adventures exceeded anything on record. The remaining fourteen are buried alive, if not crushed, and may be now hopelessly wandering in those gloomy caverns, beyond the reach of human aid, and shut out for ever, in all probability, from the light of day. / To present a distinct idea of the occurrence, I must give a brief description of the mines and the manner of working them. There are several openings to the coal, which are numbered 1, 2, 3, 4; &c.; two of them are above the bed of the Lackawanna, the others are below it. These openings are holes in the side of the hill, about six feet by eight, and the main entrances to the mines. From these mouths are roads leading into the interior of the mountain, following the dip of coal, sometimes ascending and sometimes descending. The extent of the mining operations will be perceived from the fact that there are thirty-five miles of railroad laid under ground, in the bosom of the mountain, including the main roads with all their ramifications. / The coal lies in a horizontal stratum of from four to six feet in thickness, between strata of slate. The method of mining is, to cut out and remove the coal, leaving only piers of it to support the hill above, aided by wooden props made of sections of trees, cut of suitable length. As fast as the coal is removed, the lateral branches of the road are abandoned, and the main avenues pushed on to the coal beyond. In this way the coal has been removed for a mile and a half under the mountain, and the roads extend that distance. About a mile from the mouth of No. 1, an air-hole was cut to the surface, up an inclined plane, by which access could be had to the surface of the earth, and down which props were taken. The excavation for coal extends half a mile or more beyond this opening. It was in this vicinity that the accident occurred, and by closing the mouth of this passage cut off all hope of escape to those within in this direction. / As fast as the coal is removed, no particular care is taken to support the mass above, in the chambers which are abandoned; the props are left to decay that the rock and earth may gradually settle down and fill up these cavities, as it has done in former instances; but care is taken to guard the main avenues to the coal from being thus obstructed. / The coal lies beneath a mass of slate; above the slate is the sand stone rock, and above this are the gravel and soil. I have often noticed, in passing through the mines, that many of the ends of the props, which support the slate above, were shivered like a broom, from the vast pressure on them; and I never saw this indication without thinking what might happen should the mass from above take a notion suddenly to descend, and always breathed easier when I had passed through the mines and emerged to the light of day. / Symptoms of the working of the mass above have been for some time observed; and these symptoms had greatly increased for a few days previous to the catastrophe. Everything was done which could be done in these circumstances to avert danger. No one supposed that the rock above would prove so firm or that it would settle suddenly or in a mass. / Only a few workmen, of whom there are nearly four hundred employed in the mines, had gone in the mines on Monday morning, when Mr. Clarkson, the superintendent, discovered the ominous appearances, and immediately set some hands to work in propping up the slate. On coming out of the mines, about 8 1/2 o'clock, he met Mr. John Hosie, (who is well known on the Croton water- works as one of the ablest masons, and who has been in the Delaware and Hudson Canal Co.'s employment about a year, preparing himself to take charge of the new mines to be opened below Carbondale,) and told him that he had better wait till he could go with him, and they would examine the mines together. / Mr. Hosie went on, however, into

No. 2 intending to join Mr. Clarkson presently, and had proceeded about a mile when instantly the mountain over his head had descended with an awful crush of everything which opposed its progress and shot down over him, filling up the road with crushed coal and bending him double, leaving not a foot of space between the solid mass above and the crushed coal below. The distance descended was the height of the mine, or from six feet to eight feet. So great was the pressure of the air that it produced a painful sensation, as if some sharp instrument had been thrust into his ears. All was total darkness, every light in the mine being instantly extinguished. Ever and anon the thunder of the falling masses roared through the caverns. After waiting a suitable length of time for the rocks to cease falling, Mr. Hosie began to remove the loose material around him and to creep. He tried one way and it was closed. He then proceeded in the other direction; and after nine hours' incessant toil, creeping, removing loose coal and slate, and squeezing himself past obstacles, he made his way into the open mine. Here he tried to strike a light, but his matches had become damp and would not ignite. He then felt around him and discovered by the direction of the railroad that instead of making his way out, he had gone farther into the mine, and was cut off from a return by the mass which had settled down upon the road. He then bethought him of the air-hole, and attempted to reach it; but that passage had been crushed in and closed. Being in the vicinity of the mining operation he found some powder, and spreading it on the floor, endeavored with a pick to ignite it, but could not. He found also a can of oil, which he reserved in case of necessity to use for food. / All was total darkness, and the part of the mountain over him was also settling, throwing off huge pieces of slate, and exposing him to imminent danger at every step; for but a part of the mass above had come down at once, and the other seemed likely to follow. Sensible of his danger, Mr. Hosie protected himself as well as he could; he wound up his watch and felt the time by his hands. He also, with a piece of chalk, wrote in different places his name and the hour when he was at certain points. Being in total darkness, however, he missed his way, but was enabled through his acquaintance with the mines to set himself right. He first tried to reach No. 1, but after toiling to that road, found that it was also crushed in. His only chance seemed to proceed at right angles with the main arteries of the mines and pass over to No. 3, and this he labored to do in accordance with his best judgment. / At one time he passed through a narrow entrance into a chamber, and in endeavoring to creep out on the other side, he was caught in a narrow place by the hill above settling down upon him, and remained in this position about an hour, expecting to die there. But another settling of mass crushed out some of the materials around him, and he was enabled to free himself and draw back into the chamber of the mine. In returning, however, to the hole by which he had effected his entrance, found to his dismay that it was closed; and he was compelled to hunt a new passage, and finally to dig his way out with his hands. / Thus, after working for more than 36 hours, he at length reached No. 3, where he rested, and then when the hill had partially ceased its working, preceded toward the mouth of the mines. On his way he met Mr. Bryden, one of the superintendents, who, with his men, was exploring the cavern with lights in search of him; and at about five o'clock in the morning he emerged to the light of day, having been given up as dead, and been incarcerated in utter darkness beneath a settling mountain for forty-eight hours. Mr. Hosie told me many of these particulars, and the others I gleaned from the principal officers of the Company, to whom they were narrated. / At one time Mr. Hosie saw lights at a distance, but

they soon vanished. They were the lights of the men in No. 3, seeking for him. These lights, however, assured him that he was pursuing the right course. Mr. Hosie's hands were scratched and cut up by working, so as to be completely covered with sores. He never for one moment lost his self possession, and to this fact, added to his tact and perseverance, is to be ascribed his deliverance. / There were about forty men in the mines when the catastrophe occurred, and the twenty-six who escaped owed their preservation in a great measure, to Mr. Bryden, one of the superintendents, who conducted them out with great coolness and self possession, while portions of the hill, other than those which first fell, were settling down around them. Learning that one poor Irish laborer, who had been struck down by slate, was left, with his leg broken, he went back alone and brought him out. Sometimes he was compelled to creep and draw the man after him, through crevices which were soon after closed by the settling of the hill. In two hours more the whole had shut down, so that if he had been left his death would have been inevitable. Thanks to Mr. Bryden for his coolness, intrepidity and humanity. / The greatest possible efforts are now made by working night and day to reach the place where the fourteen were at work; but faint hopes, however, are cherished respecting them. The places cannot be reached before the middle of next week, if then. The probability is that they have been crushed to death. Most of them are men with families. One boy is only known with certainty to be dead. / Except for the loss of life, this unforeseen occurrence is not much to be regretted, nor will it greatly impede the company's operations, since it has occurred at about the time when it is usual to suspend labor for a couple of months to repair for the spring, and everything will be rectified before then. The immense strength of the rock above prevented the hill from settling in the usual way; but now it is down, it is to be rejoiced at as it frees from future danger, and the roads when reopened will be perfectly secure. It was an innovation for it to come down suddenly and in a mass, instead of the quiet, decent way it has adopted in former instances, and no human foresight could have predicted the manner of its descent, nor could human prudence, in the present state of knowledge, have provided against it. / The quantity of the mountain fallen is variously estimated. Mr. Bryden said that it was about three-quarters of a mile long, by half a mile in width. Mr. Clarkson said that it was about half mile long, and an eighth wide. In the former case it would be about 240 acres, and in the latter 40 acres. Mr. Archbald, the chief superintendent of the mines and railroad, whose science and practical skills are not exceeded, estimates the amount fallen at far less than either of his assistants. Since the first avalanche, it must be borne in mind; however, many other portions have gone down. What the extent of the whole is, no one can conjecture, with any approximation of certainty; and it is exceedingly difficult at present to get any information respecting it. / I do not know that the company have any interest either to magnify or conceal the matter, inasmuch as it is more likely to prove a benefit than damage to their future operations. The only expense attending it will be to repair the roads and move the obstructions; but these will then be the safer, and the knowledge acquired by this experience may prove of the greatest utility hereafter. / The occurrence seemed to me so unlike anything I ever heard of, that I commenced writing the account of it to my friends, but it has proved so long, that, to save multiplications of letters, I concluded to send it to your paper, which most of them are accustomed to read; and they may, if they choose, consider it as personally addressed to each of

them. There may be others of your readers also to whom it may not be uninteresting. / With sentiments of respect, I am yours, / H. A. ROWLAND."

John Hosie (born 06-03-1812, died 05-07-1881; wife, Julia A. Hosie;
both interred in Dunmore Cemetery, Dunmore, PA)

6. "MORE OF THE ACCIDENT. / Since our last paper went to press, the bodies of Patrick Mitchell, Wm. Clines, and Ebenezer Williams have been taken from the mines." (*Carbondale Democrat*, February 6, 1846, p. 2). The earthly remains of Ebenezer Williams were buried in Maplewood Cemetery. See the data from the Maplewood Cemetery interment records given hereafter:

Burial No. 394 (burial made after January 14, 1846 and before February 13, 1846) in the "Record of Interments, &c., Maplewood Cemetery, Carbondale, Lackawanna Co., Pa." reads as follows:

"Williams	Found Dead	Welch"
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The earthly remains of Patrick Mitchell and William Clines are now interred in the New Catholic Cemetery (Russell Park), Carbondale.

Alexander Bryden moves out of Carbondale in 1851

ALEXANDER BRYDEN, ESQ.--This gentleman, late a Superintendent of the mining operation of the Del. & Hud. Canal Co., in this place, is, we regret to learn, about removing from our community to take charge of the works of another company, recently organized, farther down the valley. By the native goodness of his heart, the disinterestedness of his conduct, the uniform urbanity of his manners and his sterling integrity, he has won a noble estimation in the affections and esteem of his fellow citizens generally. To the Miners, especially, he is peculiarly endeared by his courageous endeavors, braving every danger, to extricate all whom it was possible to save, from the imminent perils to which they were exposed by the "fall of the mines" some seven years ago, and the "flood in the mines" of last season. We do not believe he has an enemy on earth. The aspirations of this whole community for his future happiness and prosperity will arise to bless him in his new home. (*The Carbondale Transcript and Lackawanna Journal*, Friday, August 15, 1851, p. 2)

7. The Bryden testimonial that was held on December 8, 1851: articles in two Carbondale newspapers on the testimonial: (a) "The Bryden Testimonial" (*Carbondale Transcript and Lackawanna Journal*, December 12, 1851, p. 2); and (b) "*From the Transcript. / Presentation of a Testimonial to ALEXANDER BRYDEN, Esq., / By the Miners and Citizens of Carbondale City, at the Odd Fellows Hall, Dec. 8th, 1851.*" (*Lackawanna Citizen*, December 19, 1851, p. 2; this is a reprint of the original article for the *Carbondale Transcript and Lackawanna Journal* of the preceding week, December 12, 1851). Here is the article from the *Carbondale Transcript and*

Lackawanna Journal: "**The Bryden Testimonial.** / On Monday evening, 8th instant, a very large number of citizens assembled at the Odd Fellows Hall in this city, to witness the interesting ceremonial of the Presentation to ALEXANDER BRYDER, Esq., of a Compass and case of Mathematical Instruments by our Miners and others--to which we alluded in a former number of our paper. / An occasion of tendering to deserving worth so substantial a mark of esteem has seldom occurred, prompted as this was, by feelings of the warmest gratitude towards the recipient. All who have had the pleasure of intercourse with Mr. Bryden, will bear us witness to his correct deportment, modest demeanor and kindliness of disposition: his hand always open as day to 'melting charity,' and his best efforts always put forth to enhance the happiness of all around him, the circumstance of his removal from our midst to another sphere of usefulness seemed to call for some marked expression of the feelings of our people. It was while one of the Superintendents for the D. & H. Canal Company, that the 'Falling in of the Mines' occurred, and none will ever forget the peril he encountered--the incessant toil and perseverance which he manifested, in extricating the unfortunate victims of that fearful calamity. On other occasions he has signalized himself in rendering aid to the Miners when peril was nigh, and it would be indeed strange, if that large and respectable class did not feel a deep sense of gratitude for his manly exertions in their behalf. We are happy that worth is appreciated in our midst, and sincerely hope the 'Compass' may point us all to the polar-star of manly conduct and generous sympathy for our fellow-men, as assuredly as its undeviating course has marked the career of its recipient. / The meeting was organized by choosing Hon. JAMES ARCHBALD, as President of the evening; James Clarkson, John Lee, Edward Jones, Anthony Grady, Henry Evans, Patrick Moffit, jr., Thomas Jones, John Kirkwood, James Hamilton, Neill Fallon, William Morgan, Richard Keating, William Hughes, Terence Powderly, Patrick Kearnes and Joseph Gillespie, Vice-Presidents; and S. S. Benedict and G. M. Reynolds, Secretaries. / The president having stated the object of the meeting, Mr. Anthony Finnerty, in behalf of the Miners, delivered the presentation Address, which was briefly responded to by Mr. Bryden, returning his heartfelt thanks for the kind and flattering manner in which the Testimonial had been tendered him, and more at length in his behalf by Capt. Geo. R. Love. / Able addresses, pertinent to the occasion, were made by Col. Peter Byrne, Geo. Perkins, Evan Harris, Martin Canavan, F. P. Grow and A. L. Mack, Esqrs. / Capt. E. L. DANA, of Wilkesbarre, being loudly called for, rose, and in a felicitous and eloquent strain, enchained the attention of the audience for some time. His remarks were well adapted to the time and circumstances, and none regret his presence. / S. S. Benedict, Esq., in conclusion to some happy and appropriate remarks, offered as a sentiment, the following: / *The Miners of Carbondale*--Honest men, industrious, intelligent and liberal citizens,--worthy of such an overseer as Alexander Bryden, Esq., whose services they so long enjoyed and so well appreciated. May his successor ever treat them with equal fairness and win just as highly upon their regard. / Before adjourning, the subjoined Resolution, offered by Lewis Pughe, Esq., was unanimously adopted: / *Resolved*, That the thanks of this meeting be tendered to the Committee of Arrangements for their disinterested labor in bring[ing] about so happy an 'event' as the one we now have the pleasure of participating in. An occasion where honesty, industry and perseverance, receives a *token of merit* from the hard-working, honest yeomanry of the D. & H.

Company's Mines. / The ceremonies at the Hall being concluded, a 'goodlie companie' adjourned to the Saloon of J. H. Estabrook, and partook of an oyster supper. Here the toast and jest were freely passed--and the utmost harmony mingled with the hilarity of the evening. At a seasonable hour the company dispersed, well pleased with the occasion which brought to their memory 'Days of Auld Lang Syne.' " (*Carbondale Transcript and Lackawanna Journal*, December 12, 1851, p. 2)

8. [Obituary of John Hosie] "**DEATH OF JOHN HOSIE.** / Mr. John Hosie, who was at one time prominently identified with the management of the coal mines of the D. & H. C. Company, and who was a resident of this city for a considerable period many years ago, died in Scranton last Saturday. He was a man of considerable intelligence and of indomitable energy. He was for many years, and up to the time of his death, prominently identified with the coal operations in this region. His connection with the D. & H. C. Company commenced in 1845, and a few months after, he took a thrilling part in the great mine cave in this city. For forty-eight hours he was buried in the bowels of the earth, but was unhurt, and by a series of remarkable providences, finally escaped from his perilous position. Many times during his confinement in the subterranean prison he gave himself up as lost, and each time some incident occurred which gave him new hope, and encouraged him to exert every possible effort to escape. Of seventeen persons who were then entombed, he was the only one who came out alive and many of the buried bodies were never recovered. / Mr. Hosie was sixty-nine years of age, had been a widower two years and a half, and left two sons and two daughters. The funeral ceremonies were conducted by Rev. N. G. Parke, of Pittston, one of his early pastors, who delivered an eloquent and appropriate address." (*Carbondale Leader*, May 14, 1881, p. 2)

- In September 1899, P. S. Joslin contributed a series of articles to the *Carbondale Leader* on the early history of Carbondale. In the article in that series titled "**CARBONDALE IN ITS I[N]FANCY. / A Series of Articles on the Early Days of the Anthracite City by One of Its Pioneers,**" published on September 16, 1899, p. 2, Joslin presents biographical sketches of Alexander Bryden and John Hosie, co-superintendents of the D&H mines. Here is P. S. Joslin's biographical portrait of John Hosie: "**JOHN HOSIE.** / As Mr. Hosie was co-superintendent with Mr. Bryden in the mines, we think it appropriate to give a brief sketch of his life here. / Mr. Hosie was born in Sterlingshire, Scotland, June 2, 1812. In youth, he manifested a sterling character and in manhood, like the coin of the realm was sterling worth. / His father was a mason and stone cutter by trade, which it appears the son was familiar with and worked at. His education was limited to the common schools of the neighborhood. An elder married sister, whose husband kept a hotel, made him a present of a pony, from which time, when out of school, he occupied himself in carrying parcels, and when he was fourteen years old, found he had saved about 80 pounds sterling. Then the idea came to go to America and without the knowledge of his parents he purchased a ticket for that purpose. When he informed his mother of his purpose she was surprised and wanted to know where he got his money. He satisfied her, but both

parents tried to persuade him to remain at home, but no, he wanted to go and relieve his parents from his support. Finding his mind fixed, they thought an elder brother should go with him. / When they arrived in New York they got employment, John as stone cutter and his brother Andrew as carpenter. After several months near New York, he went to Philadelphia and worked with another brother James, six years. From this time forward, he was engaged in superintending or constructing railroad bridges, viaducts, or any work in stone masonry. / In 1842 he entered the employ of the Delaware & Hudson Canal company in charge of the gravity between Carbondale and Honesdale. In 1845 he became mine superintendent at Carbondale. He was married on the 12th of November of the same year to Miss Julia A. Beattys, of Waymart. Two months after that date, Jan. 12, 1846, came the terrible cave in of the mines, in which he was entombed and imagination cannot describe the anguish of that young wife who thought she would never see him again. / After digging in the darkness with his bare hands among the broken coal and rock to try to gain a way towards some opening, he did reach a spot where he could hear the searching parties and making his presence known he was rescued by the aid of Mr. Bryden after being in the mines 48 hours. The flesh of his fingers was worn off to the bones. / Mr. Hosie left the Delaware & Hudson company's employment in 1856. His after life was an active one, being engaged as contractor or superintendent of railroads or mine work in many parts of the coal regions of the state." (*Carbondale Leader*, September 16, 1899, p. 2)

9. In September 1899, P. S. Joslin contributed a series of articles to the *Carbondale Leader* on the early history of Carbondale. In the article in that series, titled "**OUR GREAT MINE DISASTER**," which was published in the *Carbondale Leader* on September 23, 1899, p. 2, Joslin presents the account by Andrew Bryden (one of Alexander Bryden's sons) of that mine disaster. Here is the article: "**OUR GREAT MINE DISASTER. / Andrew Bryden Describes the Fall of Roof in Nos. 1 and 2 Drifts in 1846.** / P. S. Joslin who is contributing a series of articles to the LEADER on the early days of this city is indebted for the following 'account of the fall in the mines at Carbondale Luzerne county Pa.,' to Andrew Bryden of Pittston. / 'On January 12th, 1846, about 8 o'clock in the morning a serious cave or fall of roof occurred in drifts No. 1 and 2 of the Delaware and Hudson Canal company at Carbondale, Pa., by which fourteen persons were killed, six of which were never found, although the company made great efforts to find them. The following are the names of the persons who were killed: Patrick Leonard, Henry Moore, James Magrath, Patrick Walker, Patrick Mitchell, John Brennan, Peter Crowley, Anthony Walsh, Mark Brennan, William Clines, Michael Toolan, Henry Devanney, John Farrell, Ebenezer Williams. One other person, Roderick Phillips was enclosed in the mines for about twenty-four hours when he was found by Mr. Bryden and helped out. He died suddenly of heart failure some time afterwards the cause of which was attributed to his uncomfortable confinement in the mine. The eight persons whose bodies were found were killed upon the main roads, some of whom were engaged in propping up the roof and encasing the pillars along the level heading. Where the squeeze was the greatest when the fall came it was like a thunder clap and extended over an area of from 40 to 50 acres and over a half mile along the headings. / The bodies of the men found showed evidence of their being killed instantly. All of the bodies were found in No. 1

level and on the plane itself and those not found were upon the plane heading, or in the chambers worked from it. / When the fall occurred I was then at work at the face of the plane heading which was driven into the solid coal about two hundred feet inside of the last entrance driven up from the No. 1 level chambers. Two drivers had just come in for our car and were at the face of heading when the cave occurred. We all felt the concussion very sensibly and our lights went out, but we had no idea that such a calamity had occurred, but in passing out the heading we saw part of the havoc it had made. Loaded coal cars were lifted and thrown off the track and the walls which were built up in the entrances along each side of the heading were blown out by the concussion. Before reaching the fall, we met twenty-five or thirty men running in towards the face of the heading. I asked them what the trouble was, and they said the mine was all caved in and there was no means left for our escape, across the faces of the chambers where we had confidently expected to reach the air slope at the outcropping of the vein. This was a great discouragement to all of us, as we did not expect to be able to get out by going down into No. 1 level as we thought it would be surely closed in, as we imagined that the fall had started from it; on account of it squeezing so that there was no persons working there excepting the party propping. In the chamber below the plane level through which we had to pass, it had partially broken down, and the breaking of the roof was making a great noise, and threatening to fall down, but the party clung closely to the heading as there was no fear of it breaking down, but when some of us would start out to the entrance occasionally, all would follow out, and it took some little time to get them all quiet. When we approached the entrance to hear how it was working, it made such a noise that none dared to venture through it. I proposed that as all means were cut off, from getting out at the outcrop, that we should try to go through the fall or falling ground, and try to get out at some of the lower levels, but we should go in small parties of three or four together, for fear of running over and killing one another, in case of a piece of rock falling upon, or beside us, but the great body of the men were not in favor of that, and some of them said let us all stay, or go out together. I said I would not go out in that way, but would go with the first party, or stay until the last. / About this time, my father, Alexander Bryden, the mine foreman, found his way into us and called upon us to come out. You may be sure it was a welcome call to all of us, and we lost no time in responding to it. When the last of the party reached him he asked if there was any other person left in the mine alive. Some the men said that Dennis Farrell was at the face of the chamber severely injured across the spine so that he could not walk. My father asked if any of the men would go in with him to carry him out, but none of those who came in with him, nor those that were in before would go, as they feared that the place they had to pass through would cave in before their return. But this did not keep my father from going, so he went in alone, and carried him out to a point where the others could come to his assistance. The distance he had to carry him would be about a quarter of a mile, and the others carried him out upon a board, about a mile and a quarter, to daylight, and from thence to his home. Dennis Farrell was found under a large piece of coal when the miners passed through his chamber. They rolled the coal off him and when they found he could not walk, they set him up in the corner of his chamber, and gave him a light and left him, as they did not know how they were going to get out themselves. / After the piece of coal fell upon Dennis, his brother John, who was

working with him, ran into the next chamber to get help to roll the chunk of coal from him and while he was gone the fall came and John was caught by it and was never more seen either alive or dead. / The passage through which we made our way out, between the plane heading and level heading, did not remain open very long after we got out, and it was entirely closed up when the searchers went in after noon of that day and it was not opened again until about a year after. The force of the expelled air at points along the levels was so great that it broke up the cars along the road into small pieces. One driver boy was killed by its force and others were severely injured. / My father with searching parties kept up the search for several days. On the morning of the third day they found John Hosie, mine foreman in one of the headings in the dark. He lost his light when the cave took place and he had been wandering around doing what he could to find the way out. The place in which he was found was visited by the searchers the day before, but he was not there. When found by my father he could only say two words, 'Oh Bryden,' when his heart failed him and he broke into tears. He no doubt had suffered more than any one caught in the fall, as he was in darkness and danger for forty-eight hours. During all this time his young wife was in great distress, on account of his loss, and never expected to see him in life again. While Mr. Hosie was in the darkness and gloom he kept his watch running so that he knew how the time was passing, by feeling the hands of his watch, and it was found out afterwards that he had written on some of the pillars with white chalk, that he was at that point at a certain time of the day, but the searching parties failed to see the writing, when they passed through the entrances, at those points. You may imagine the condition of a man who has been feeling his way over rocks and coal in the dark, for the length of time he had, his hands were torn and bleeding, and his clothes in rags. / In the heading in which I worked we left a fine bay horse which had been in the mines but a few days. We had to leave him in the mines to starve or die for want of air. / After the place was opened up again a year after, I went in to get my tools, and had the curiosity to hunt the remains of the poor horse, and found his bones in a place where the roof was low it having been squeezed down from seven feet to less than four feet high. I also examined along the edges of the fall towards the outcrop, to see whether there was any way to escape in that direction, but I found all closed down tight. On the plane, heading and chambers the fall broke off in what we called the rock roof, where there was no slate over the coal. At some points the hard sandstone rock was broken off, along the pillars almost as square, as if it had been sawed. The strength of this rock was no doubt the cause of the extensive cave. The roof had broken away, at some weak point, and extended into the hard rock where it could not break off in a small space and so it came over a large area, crushing out pillars and everything in its way in an instant, after it got a fair start. When I went into the mine about 6 o'clock in the morning I heard no indications of a squeeze or fall of roof until the sudden crash came. / This accident having occurred fifty-three and one-half years ago it is not likely that many now live, who were in the mine at the time, and I am often asked to have the account of the accident published in the papers, so that an account of it may be preserved, from one, who was in the mine at the time, of the fall, which entombed so many men, and cast a gloom over the whole community, as well, as the families with which they were connected. / The company through their officers, superintendents, foremen, and workmen, did everything that could be done, to find the bodies of those entombed, and they were successful in

getting the bodies of eight out of the fourteen. The others were at too great a distance into the fall, and their scattered conditions so uncertain, that after about six weeks search for them, they gave up in despair of reaching any more of them./ This being about the first cave, of such extent and loss of life, in the coal mines of Pennsylvania, it cast a gloom over the whole country." (*Carbondale Leader*, September 23, 1899, p. 2)

- **[One Hero, Many Non-Heroes]** From the initial account of the 1846 mine cave-in that was published in the January 16, 1846 *Carbondale Democrat*, we learn that Dennis Farrell was nearly killed in the initial fall by coal and stones falling upon him. To relieve him, his brother, John Farrell, ran to get an iron bar, and was never seen again. When Alexander Bryden, at the head of a rescue party, entered the mine and located 18 men in a gallery or heading about a mile from the mouth of the mine, he learned from them that Dennis Farrell, badly wounded, lay at the face of the chamber four or five hundred feet off in the most dangerous part of the fall. Farrell, wholly disabled by a spinal injury and unable to walk, had been liberated by two of the 18 men from the stones and coal that had fallen on him, and then placed against the side of the mine by the two men who removed the stones and coal upon him. Those two men, together with the other 16, then "ran for their lives, from under the falling mass." In the account by the Honorable Henry S. Randall (as reported in the obituary of Alexander Bryden) of Bryden's behavior during the rescue efforts following the cave-in, we learn that when Bryden learned, from the 18 men in the gallery about a mile from the mouth of the mine where he located them, that they had abandoned Dennis Farrell to die and ran for their lives, he, Alexander Bryden, then asked if any of the 18 would go back with him to rescue Farrell. Not one of the 18 nor any among those who came in with Bryden during the rescue efforts came forward. Bryden, "with a word of indignant censure to the men for not bearing their wounded comrade with themselves to the gallery where he found them, . . . pointed out their path, bade them escape, and then turning back, entered a path more perilous and difficult than his preceding one." Bryden then went in the additional four or five hundred feet and rescued Dennis Farrell and literally carried and dragged Farrell to a point where the others could come to his assistance. The others then carried Farrell out upon a board, about a mile and a quarter, to daylight, and from thence to his home. The fortitude, courage, and heroism of Alexander Bryden can not be praised enough. As for the behavior of the 18 men who abandoned their comrade, Dennis Farrell, to die and then ran for their lives, "a word of indignant censure" (such as they received from Alexander Bryden at the time) hardly seems sufficient.

More on the non-heroes: *Miller and Sharpless*, pp. 132-33: "Despite their independence, miners were noted for their group solidarity. Highly individualistic though they might be, the working conditions in the mines forced them into close dependency on each other. They had to cooperate under dangerous circumstances. And miners expressed their solidarity in various ways. If a miner was injured, his friends took up a collection for him, sometimes even among workers on another shift. Occasionally when a miner was badly injured the other workers walked off the job

in protest or simply in sympathy for the injured man. According to one of the most noble traditions, miners immediately volunteered for rescue operations, no matter how hazardous they might be. A miner who was trapped expected others to rush to his rescue and to persist until all hope was lost; he knew that others expected the same from him as well. For miners who did not conform to these unwritten rules working conditions could be made intolerable. Such men were given the silent treatment or, worse, found themselves without help when they needed it.” (quoted from Alvin W. Gouldner, *Patterns of Industrial Bureaucracy*, 1954, p. 129)

10. Fourteen Killed:

Six bodies found and buried, five of which were identified: Patrick Walker, Mark Brennan, Patrick Mitchell, William Clines, and unidentified remains of a fifth miner--all Irish and all Roman Catholic, all buried in the Old Catholic Cemetery, later moved to the New Catholic Cemetery. Ebenezer Williams--Welsh, protestant; buried in Maplewood Cemetery. (Patrick Walker and Mark Brennan found: see January 30, 1846 issue of *Carbondale Democrat*; Patrick Mitchell, William Clines and Ebenezer Williams found, see February 6, 1846 issue of *Carbondale Democrat*)

Mark Brennan was the great grandfather of Mrs. Patricia Brennan Cobb, living on South Church Street in Carbondale in 2003.

Eight bodies never found: Patrick Leonard, Henry ("Harry") Moore, James Magrath, John Brennan, Peter Crowley (possibly "Crawley"), Anthony Walsh, Michael Toolan (possibly "Tolan"), Herny Devanney (possibly "Devany"), John Farrell: these eight were all Irish and all Roman Catholic.

When the Old Catholic Cemetery (Belmont Street) was closed and the bodies interred therein removed to the New Catholic Cemetery (Russell Park), a large monument, surrounded by 13 individual stones, in memory of the 13 Roman Catholic miners killed in this 1846 cave-in, were placed in the New Catholic Cemetery. It is known for certain that the earthly remains of Ebenezer Williams were interred in Maplewood Cemetery, Carbondale, although a tombstone (if there is one) has not yet been located.

See also, two disturbingly non-ecumenical, melodramatic, and less than historically accurate articles, both by Robert A. Hecht, that were published in the *Carbondale News* in 2003: "St. Rose Cemetery marks local mine disaster in 1846" (September 3, 2003) and "Mine monument will be relocated to original site; personal stories recalled of 1846 mine collapse" (October 8, 2003).

- Patrick Clark, a driver, very badly injured, died the following day, January 13, 1846
- Hugh Fitzpatrick and John M'Kale: thrown violently against the cars; broken bones; not mortally injured
- John Hosie: trapped in mines for two days; got out alive
- Dennis Farrell: very badly injured; rescued by Alexander Bryden
- Roderick Phillips: trapped in mine for 24 hours; rescued by Alexander Bryden, Phillips "died suddenly of heart failure some time afterwards the cause of which was attributed to his uncomfortable confinement in the mine."

See herein also "**Mine fire in 1892 at Old No. 1 Shaft**"

Also: clipping in Gritman scrapbook, dated Saturday, January 4, 1896:

"50 YEARS AGO. / An Extensive Cave-In That Occurred in This City. / Sixteen Mine Workers Lost Their Lives in the Fall of Earth and Rock. / Probably one of the most interesting and engaging persons in our city today is Michael Boland, an aged and respected citizen who lives in the neighborhood of Brooklyn street. Doubtless there are some other persons in Carbondale who will remember the terrible mine fatality which occurred at Hosie mines in the neighborhood No. 1 slope on Monday, January 6, 1846,--just fifty years ago next Monday. / A LEADER reporter yesterday interviewed Mr. Boland and was told a story which was every entertaining, yet filled with horror. The result of that fateful day brought suffering and desolation to many homes whose loved ones fell victims to the extensive cave-in. / When Mr. Boland was asked by the newsgatherer whether he remembered the occurrence he replied: 'I do, and very well, sir,' and continuing told the following story: 'It was Monday morning about nine o'clock, just fifty years ago this coming Monday, when sixteen employes of the Hosie mine gave up their lives without a moment's notice. The men went to their work that morning in their usual good spirits and when the fall came it was so sudden and unexpected that it caused the wildest terror and excitement. / 'The fall of earth and rock was one of the largest ever known and covered a territory of nearly half a mile square. / 'The settling of the earth shook the whole mine and large pieces of rock and coal fell from all sides. The wind caused by the fall extinguished our lamps and left us all in darkness and there was a horrible stampede of humanity for a place of safety. Frantic men rushed to and fro striking against each other in their mad efforts to get out to the light of day. Some of the men had their clothes nearly torn from them and many of them were injured by running against obstructions and the sides of the mine. / 'The cries of men who were pinned to the earth were heard but their piteous pleadings for help were passed by apparently unheard, so anxious was each to save his own life.' / 'Do you remember the names of the miners who were the victims?' asked the reporter. 'Yes,' said Mr. Boland; 'There was Harry Moore, Peter Crawley, Patrick Leonard, Ebenezer Williams, Patrick Clark, Michel Toolan, John Farrell, two miners named McGrath and Brennan, and a laborer whose name could not be learned; a prop boy named Patrick Walker, and five other laborers whose names never were known. The latter five men had just come to work that morning and their names had not yet been entered upon the time books of the company. / 'One of the miners named Dennis Farrell was caught by a large piece of rock falling upon both of his legs His brother John who was working with him had been thrown

down and rendered partially unconscious. When he recovered his senses he at once set about to relieve his brother. He groped about the mine for a bar, hoping that he might raise the rock. When but a few away from his brother a portion of the roof fell upon him and killed him instantly. When the body was recovered some days later he was found with the bar clutched in his hands. Farrell was afterward released by a man named Bryden. / 'In the meantime,' continued Mr. Boland, 'most of the men had succeeded in getting out of the mine, myself included, and the news of that terrible cave in was spread and was soon known for miles around, mothers, wives, sisters, brothers, children and friends soon flocked to the mine and the scene was one which I shall never forget. / 'The cries of the women whose loved ones had fallen victims was heart rending and their sufferings would wring the stoutest heart. The officials of the mines soon had gangs of men at work clearing away the mass of earth, in hopes that some lives might be saved. / 'Searching parties were organized and I was one of a party who went into the mine in the hope that we might find some men who had lost their bearings. John Hosie was one of the missing ones and we knew that he was not under the fall. On the following Wednesday we found the following inscription upon a mine rail written with chalk: John Hosie is alive, in want of oil, no light. / 'Soon after that we heard a shout and a little later we found Hosie nearly exhausted by the efforts he had made to reach the outside. He had with him a dinner pail filled with edibles, but so confused was he that he had not eaten anything. When he was taken to the mouth of the mine he fainted. / 'He was removed to his home and doctors Rafferty and Dixon, the practicing physicians in Carbondale, were called to attend him. In the meantime, knowing that the men were all dead, a coffin was made for each one of them and as an arm or some portion of a body was reached, the alarm was given and the body removed. The only possible way we could identify the men was by having; the women who lost loved ones identify them by their clothes or some mark known only to them. / 'When the boy Patrick Walker was reached he was found in a crevice but was not under the fall although he had been injured. When the searchers found him he was in a sitting position, with his hands clasped above his head, and he evidently died of starvation or fright, or was suffocated. / 'How many bodies of the victims were recovered? Asked the reporter. / 'Eight,' replied Mr. Boland. 'The others are today where the fall occurred. As soon as they were found they were buried in the old Catholic graveyard where the parochial residence now stands. Ebenezer Williams, a Welshman, was buried in the Protestant cemetery. / Mr. Boland cited other instances connected with the catastrophe, all of which are entertaining but time will not permit us to mention them. The reporter found Mr. Boland a ready talker and extremely courteous. He is one of Carbondale's most esteemed citizens and although somewhat advanced in years, he is at present enjoying the best of health and has bright prospects to live many years, to enjoy the proceeds of years of industry and toil. / Among some of our oldest residents who doubtless remember the occurrence are John Lacken of Brooklyn street and Anthony Scott of Fallbrook street but the majority of persons who worked in the mine at that time have passed away."

Extension of Roadbed to Archbald

Early history of the borough of Archbald from 1880:

"ARCHBALD BOROUGH. / The earliest settlements within this borough were made by Welsh immigrants in 1831—the families of John Evans, John D. Jones and Daniel and Evan Price. Another party followed in 1834, consisting of John Rees, David Davis, John Owens, Rev. John Davis and Deacon John Bowen. The settlers devoted their attention to cultivating farm produce for the supply of the miners at Carbondale and vicinity until, in 1856, their lands proving to be coal property, they sold to the Tinklepaugh Coal Company for \$125 per acre (the cost to them being about \$3). In 1862, the purchasing company having failed to fulfill their contract, and the lands reverting to the original owners, they sold to A. Corry and Jones, Simpson & Co., at \$200 per acre. / The first permanent residents in the valley were Thomas Swift, Michael Gilroy, Patrick Gilmartin and a few others, who came in 1845, to work on the gravity road. In the following year the opening of the White Oak colliery drew many more to the place. From that time the growth of the place has been healthy. The population in 1880 was 3,059. / The name was given to the place by Alver Eaton in honor of James Archbald; the name of the first settlement and post office had been White Oak Run. . ." (p. 462)

Welsh Calvinistic Methodist Church was organized in Archbald in 1834:

"The *Welsh Calvinistic Methodist Church* was organized among the Welsh settlers on 'the Ridge' by Rev. John Davis, in 1834. In 1848 he secured the erection of a building, and a church organization, of which Daniel and Evan Price were the deacons, and to which Father Davis ministered continuously until his death, in 1866. The society has been weakened, but it still holds services with some regularity." (1880, p. 464):

Coal Discovered in Archbald:

James Archbald and his assistant, James Clarkson, two engineers of the Delaware and Hudson Canal Company, discovered coal in Archbald in 1843. In 1846 White Oak mine was opened and the gravity railroad was extended there in that same year. For more on James Clarkson, see herein section 4521. Before the enlargements of the early 1840s, the railroad's capacity was about 100,000 tons, and the canal 200,000 tons. Following the rebuilding (canal and Gravity Railroad improvements) the railroad was capable of shipping 500,000 tons; the canal a million tons. There was a market for more, much more.

For this extension of the line to Archbald, James Archbald designed and installed two tracks, descending in opposite directions. Construction was begun in the summer of 1845 and was completed in the summer of 1846. The "stringers" [rails] on the extension were produced by Thomas Meredith (mill near Mayfield); the original rails: lines of ten by twelve hemlock rails firmly wedged in a tie or sleeper and capped by a hard wood ribbon and band of scrap iron spiked securely to the rails below.

James Archbald's Summary Description of the Line to Archbald:

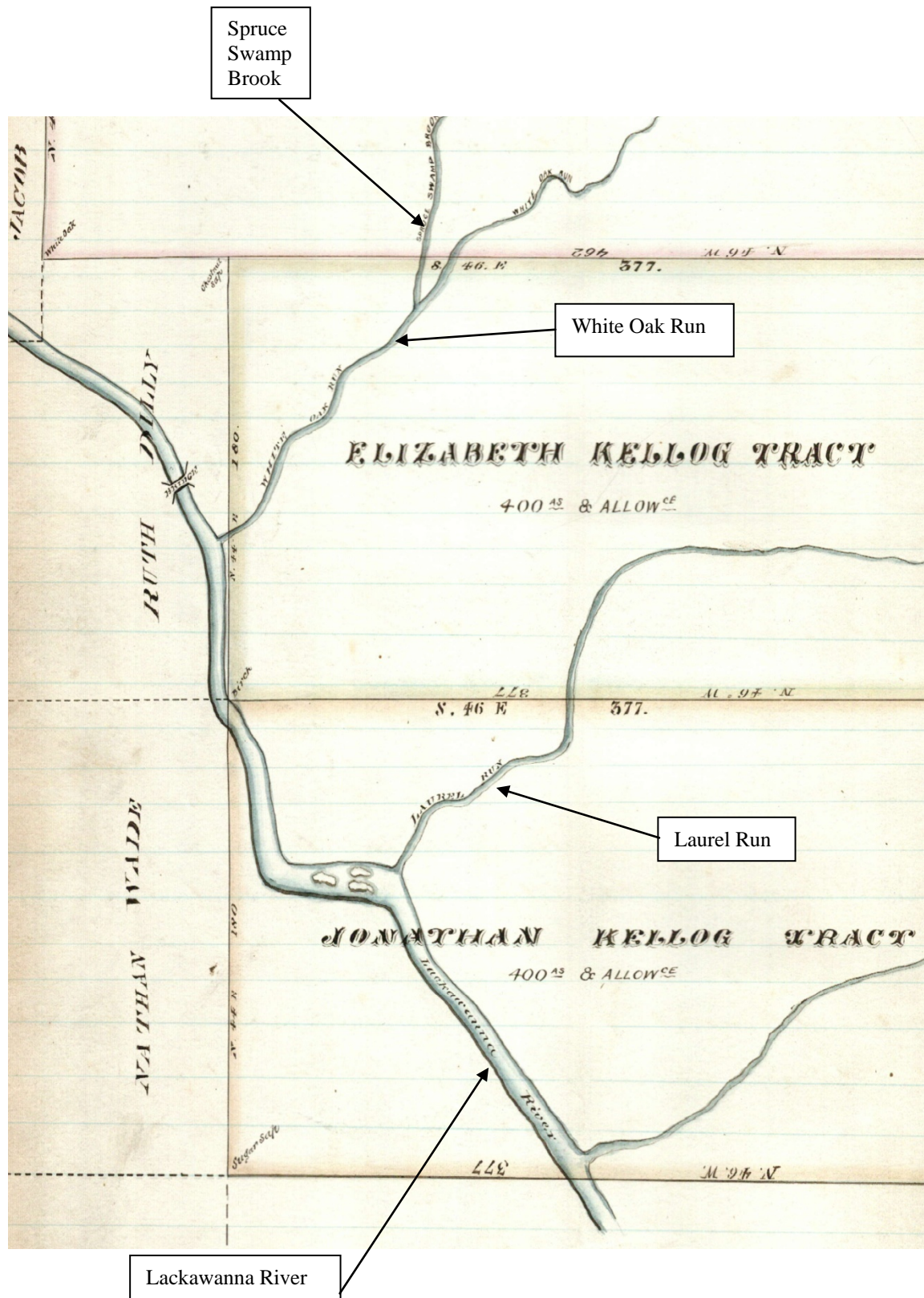
In his February 1847 report to President John Wurts, James Archbald says: "In view of this increased capacity of our main railroad [500,000 tons a year], from the mines at Carbondale to the canal it was deemed advisable, as early as 1843, to commence an extension of it some seven miles further down the valley to the company's coal lands, in the township of Blakely, in order to procure a part of the coal sent to market from this field. This extension is now finished, and mines in progress of being opened at its termination, by which we will be able, by the first of May next [1848] to deliver from three to four hundred tons per day. A profile of this road, is drawn upon the same sheet with the others, by reference to which it will be perceived that it is constructed upon the same plan as that part of our main road from No. 7 to Honesdale, with two tracks descending in contrary directions, on one of which the cars, after being loaded at the mines, are drawn up [a steep hill, later to be called No. 5 hill] by two stationary steam-engines [No. 1 and No. 2], from which elevation they run by gravity to Carbondale, a distance of seven miles, where they connect with the main road near the foot of the water plane [the plane from the mines to the foot of steam Plane No. 1]. On the other track, the empty cars are elevated at Carbondale, by one steam-engine [the Blakely engine], and run from thence to the mines [at Archbald], a distance of seven miles by gravity on a descending grade of fifty feet per mile."

P.A. Philbin Describes the Building of the Line to Archbald in 1845-1846:

P. A. Philbin, in the paper that he read on September 4, 1915 at the meeting in Scranton of The Gravity Men's Association (former workers on the D&H and Pennsylvania Gravity Rail Roads), says the following of the building of the line to Archbald: "It is not only on the score of friendship with your officers that I am privileged to be here, but I think I may also claim a sort of hereditary right because my grandfather was one of the builders of the Gravity extension to Archbald in 1846. The town of Archbald, in which I live, was named for the general superintendent of the system, James Archbald. Excepting Carbondale and Honesdale, it was the most important town on the system. The Gravity was so much a part of us and our history; so many of our people used it and found employment on it and so long have I seen it in operation, that I may be qualified, by observation at least, to say something of the part it played in our development. I shall, therefore, confine myself to the Gravity chiefly, as it relates to Archbald leaving for some other occasion the task of telling more fully its relation to the towns to the north and south of us. / **Beginning of the Extension.** / The extension of the Gravity railroad from Carbondale south was really responsible for the settlement of Archbald. In the Summer of 1845, the work of building was begun. The contract for the construction of the railroad from the Great Western mill at Jermyn to Archbald was awarded to Patrick Kearney of Carbondale and Thomas McLoughlin of Scott. The square timber used in the roadbed, to which the 'ribbon' and strap rail were fastened, were furnished by Thomas Meredith, a son of Samuel Meredith, a Revolutionary soldier and confidential friend of Washington. Meredith had a mill at Mayfield in which the timber was prepared and his son, Samuel, had actual charge of the contract. The Merediths, although men of considerable strength of character, were somewhat eccentric and the story goes that the son lost \$1,500 on this contract. When upbraided by the father for his poor exhibition of

business judgment, the son insisted that instead of losing \$1,500 on this contract, he had made a thousand dollars because he had lost a thousand less on this contract than his father had lost on a similar contract the preceding year. The fortune of the Merediths was lost in 1856 in a coal investment at Jessup, that has since proved exceedingly profitable. It was this same Thomas Meredith who sought to have the charter of the Delaware and Hudson Company annulled by the legislature because it sold lumber to its workmen.”

In the *D. & H. Deed Book – Luzerne*, on the map facing page 1, there is a map that shows the community of Archbald before the D. & H Gravity Railroad was extended to there. Here is that map:



In the 1846 extension of the Gravity Railroad to Archbald, there were three planes with stationary engines at their heads: one south plane (the Blakely plane) and two north planes. These three planes functioned until the 1858 configuration of the Gravity Railroad became a reality. All of the published descriptions of the line to Archbald focus on the 1858 revisions or after. Presented here is detailed material on the extension of the Gravity Railroad to Archbald, 1846-1858.

South Plane:

This was an inclined plane (with two engines, one half way up the hill and the other at the top above the Hospital area) that extended from the foot of Plane No. 1 to the top of Salem Avenue. Up this plane, empty cars were sent on their journey down the valley to Archbald. This plane was powered by the Blakely Engine. The level from this engine went down the valley to Archbald. This level was also known as the Blakely Level.

Note: Before the completion of the light track from Farview to Archbald in 1866, there had to be a way to get empty cars to Archbald. It was first via the Blakely Plane (1843-66) and level, and then, from 1866 on, via the “the ‘New’ Blakely level.” New light track completed, 1868.

North Planes:

There were two inclined planes (which preceded Planes 26 and 27), powered by stationary steam engines that raised the loaded coal cars to the top of the hill at Archbald. By means of the level on the second of these two planes, the loaded cars of coal rolled under gravity to Carbondale, where they entered the rail system there for shipment over the Moosic Mountain to market.

4524

South Plane, Blakely Engine, and South (Blakely) Level

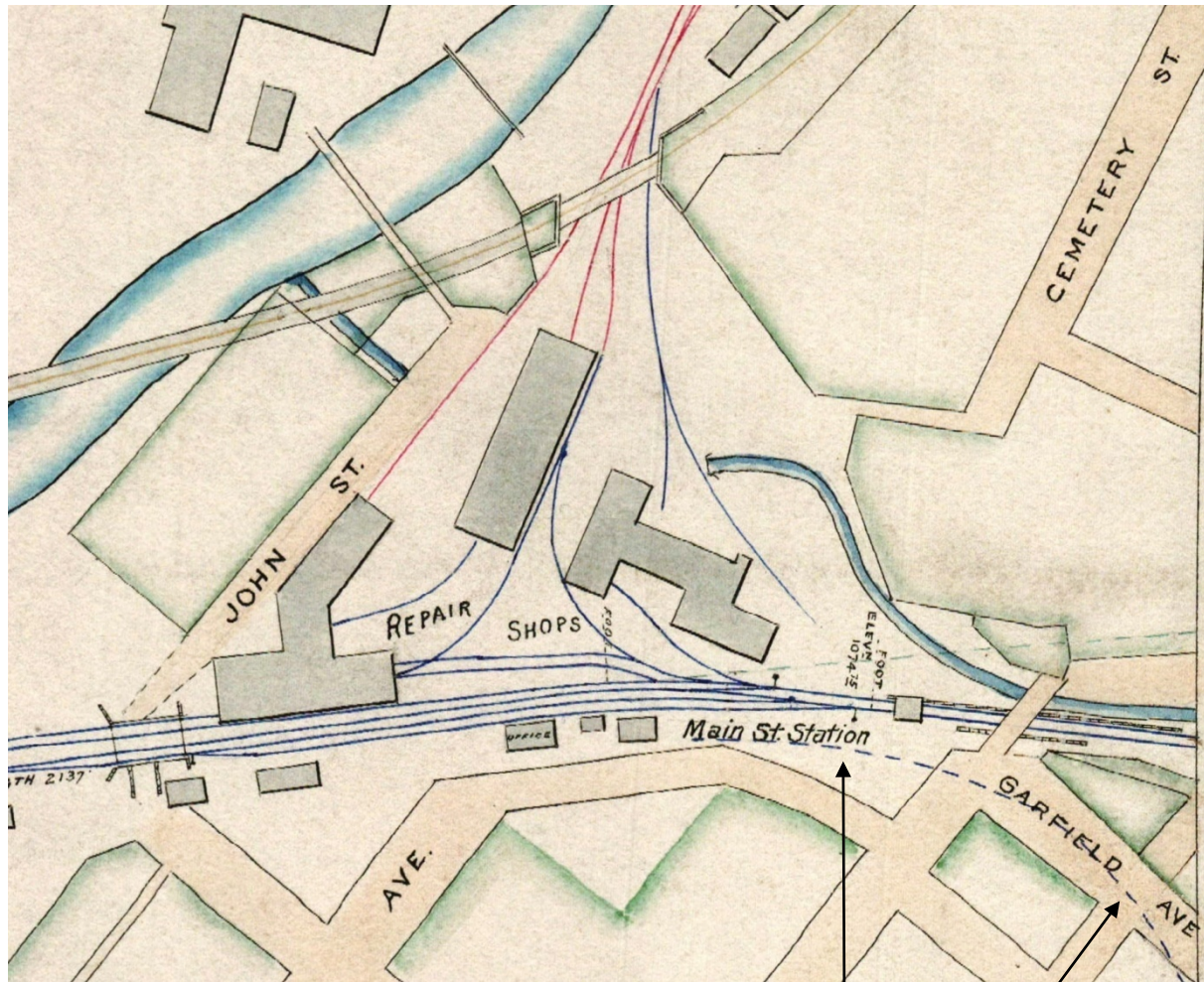
“In 1843-45 the gravity road was extended to Archbald, the ‘Blakely Level,’ now [1925] a portion of the Honesdale branch and all of the Archbald branch, taking the light cars to Archbald by gravity and a separate location with three planes [the two planes up the mountain out of Archbald and Plane 28 in Carbondale] bringing the loaded cars to the foot of Number One Plane in Carbondale. The light cars reached the ‘Blakely Level’ by means of the ‘Blakely Plane,’ a long curved plane extending from the foot of Number One to a point near the present Lincoln Avenue station. I have also seen the site of the Blakely Engine as being ‘at the upper end of Washington Street.’ ” (“Our Own Gravity Road,” *The Delaware and Hudson Company Bulletin*, July 15, 1925, pp. 6, 9-11) There was an engine on the Blakely Level on Washington Street.

Back Plane to Archbald: 1843-1866

In 1843, the D&H put in a 7-mile line of the Gravity Railroad from Carbondale to Archbald in order to get empty cars there. They built the Back Plane, a long curved plane extending from the foot of Number One, up through the St. Rose Convent grounds area and the top of Salem Avenue to a point near the present Lincoln Avenue station. This plane was also known as the Blakely Plane and also the “Old” Blakely Plane. The Blakely Engine was at the head of this plane. From

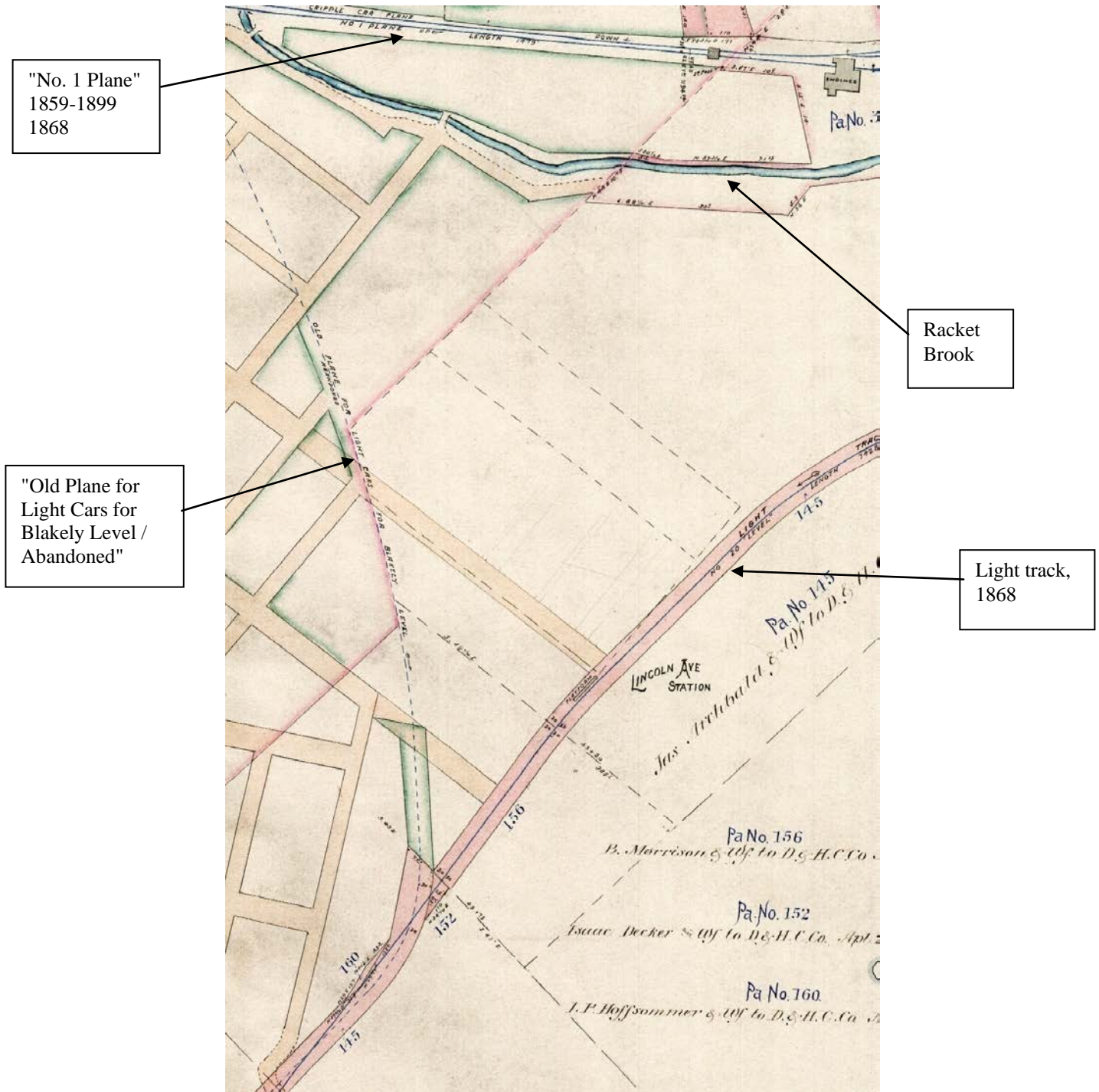
the head of this plane to the foot of mountain at Archbald was the “level” on the Back Plane. This "Back Plane" to Archbald is not to be confused with the "Back Plane" on Plane No. 28.

A section of the beginning of the “Old Blakely Plane” is shown on the map detail given below from the 1895 Gravity Railroad map volume. The plane began in the vicinity of the “Main St Station” (lower right corner of this detail) and passed down what would later be called Garfield Avenue, as it began its ascent up the mountain.



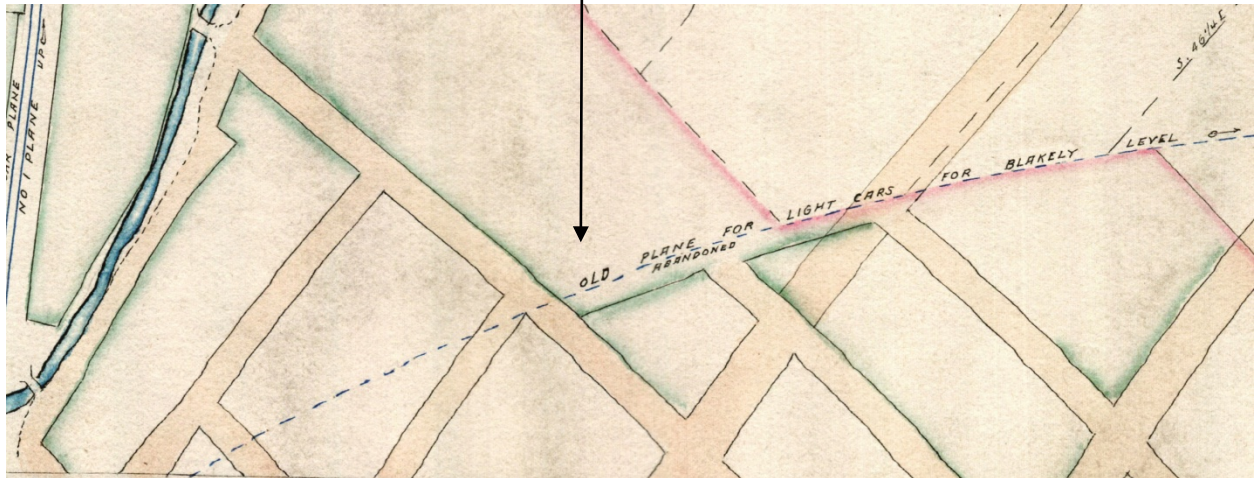
Beginning of the "Old Blakely Plane"

In the detail given below, we see (left side of detail) the plane as it ascends, curving to the south, up the mountain, to connect with the Blakely Level. At the top of the detail, we see Plane No. 1 out of Carbondale.

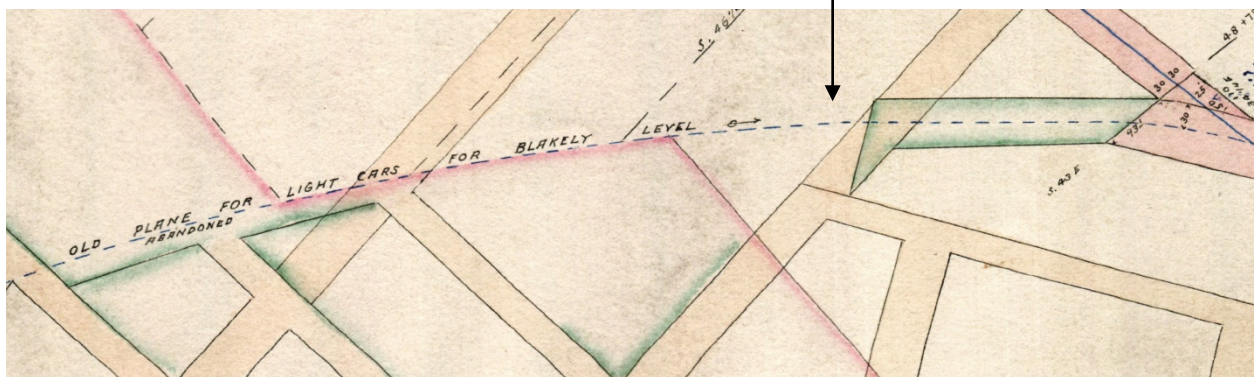


Two more views of the Blakely Plane from the 1895 Gravity Railroad map volume:

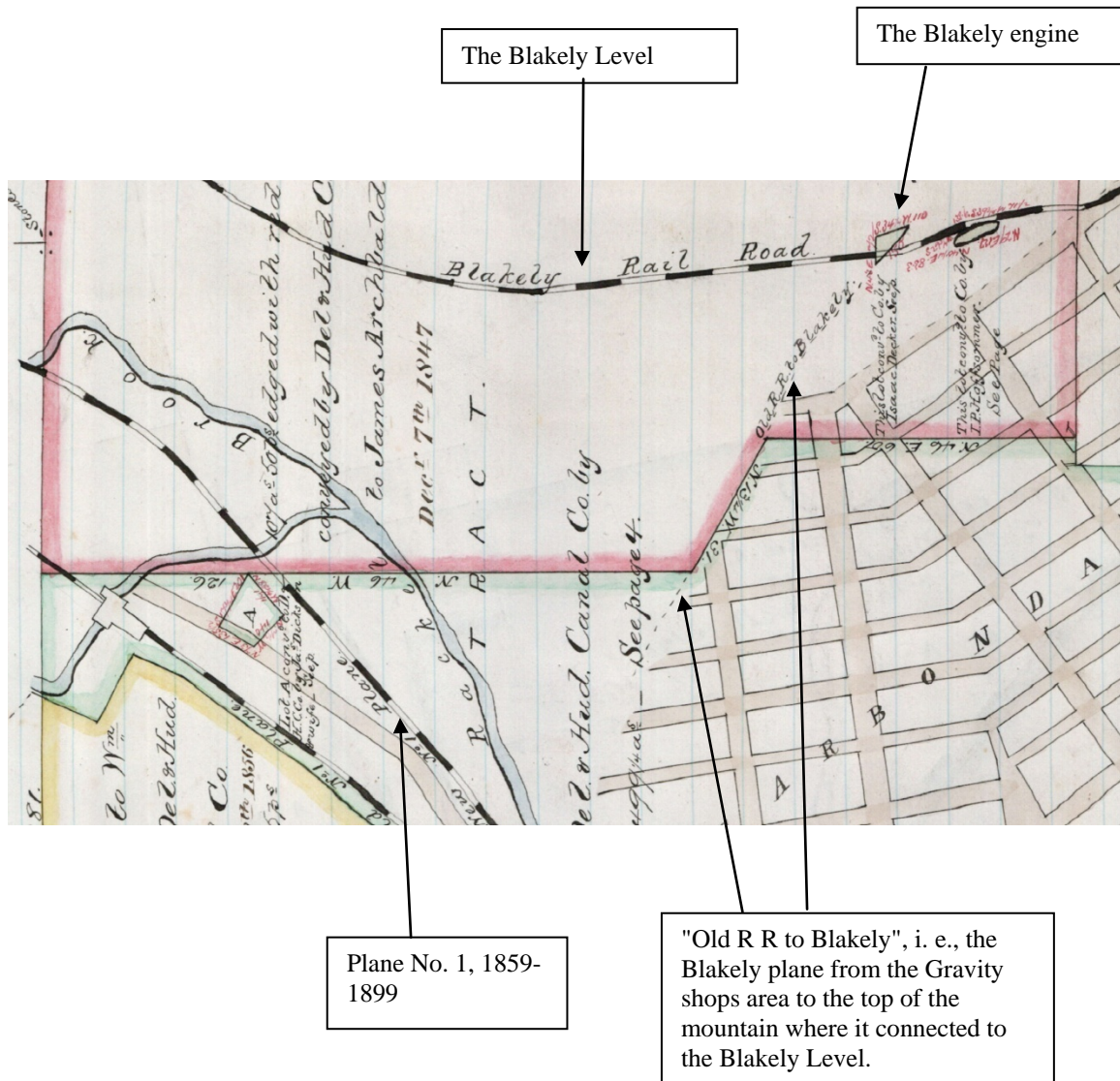
The middle section of the "old Blakely Plane"



The upper section of the "Old Blakely Plane," at the head of which was the Blakely engine.

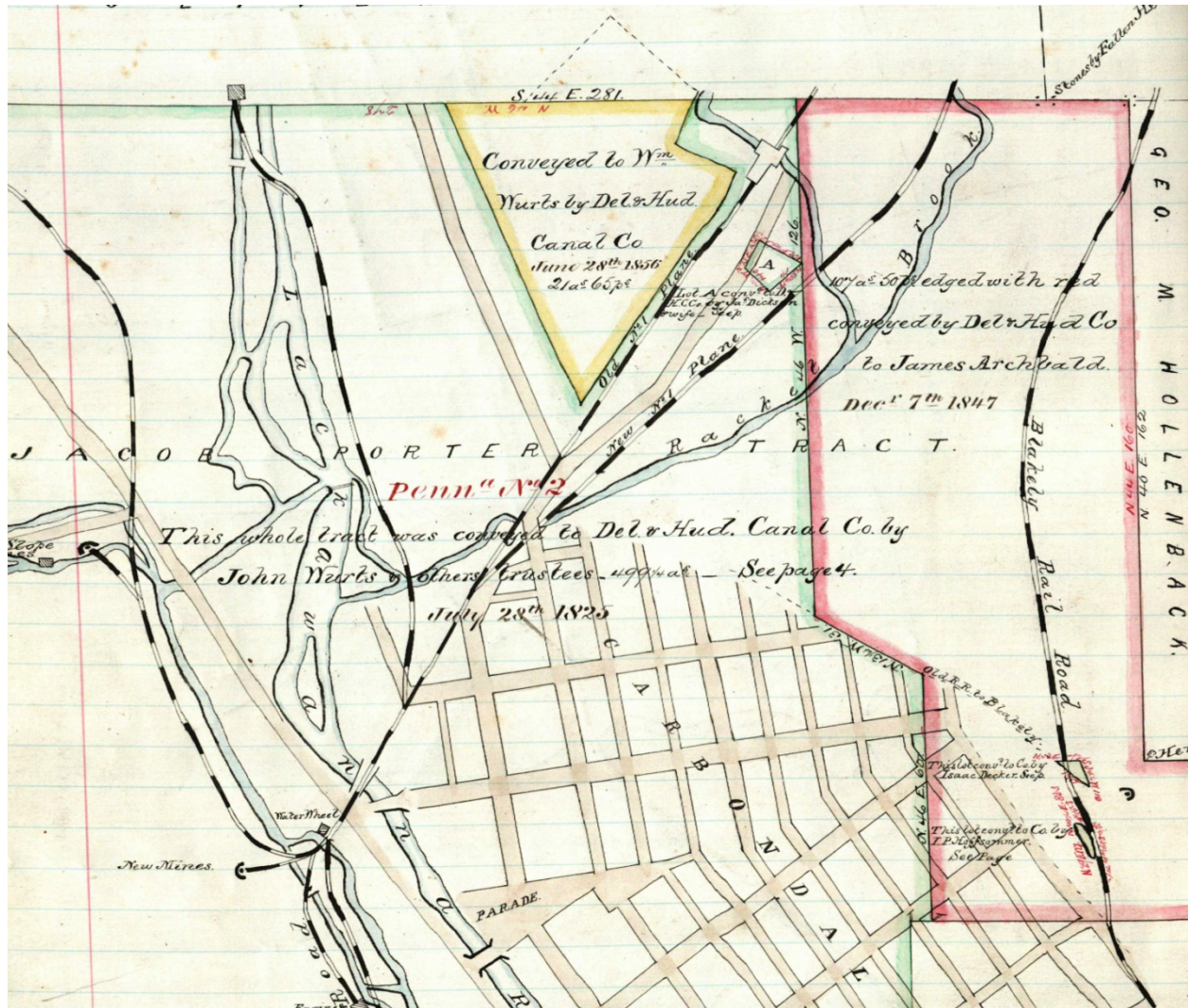


This same area is shown on the map, p. 12, in *D&H Deeds Luzerne I*, which illustrates the deed, pp. 1-6, dated July 28, 1825, between John Wurtz & others, Trustees, and The Delaware & Hudson Canal Company.

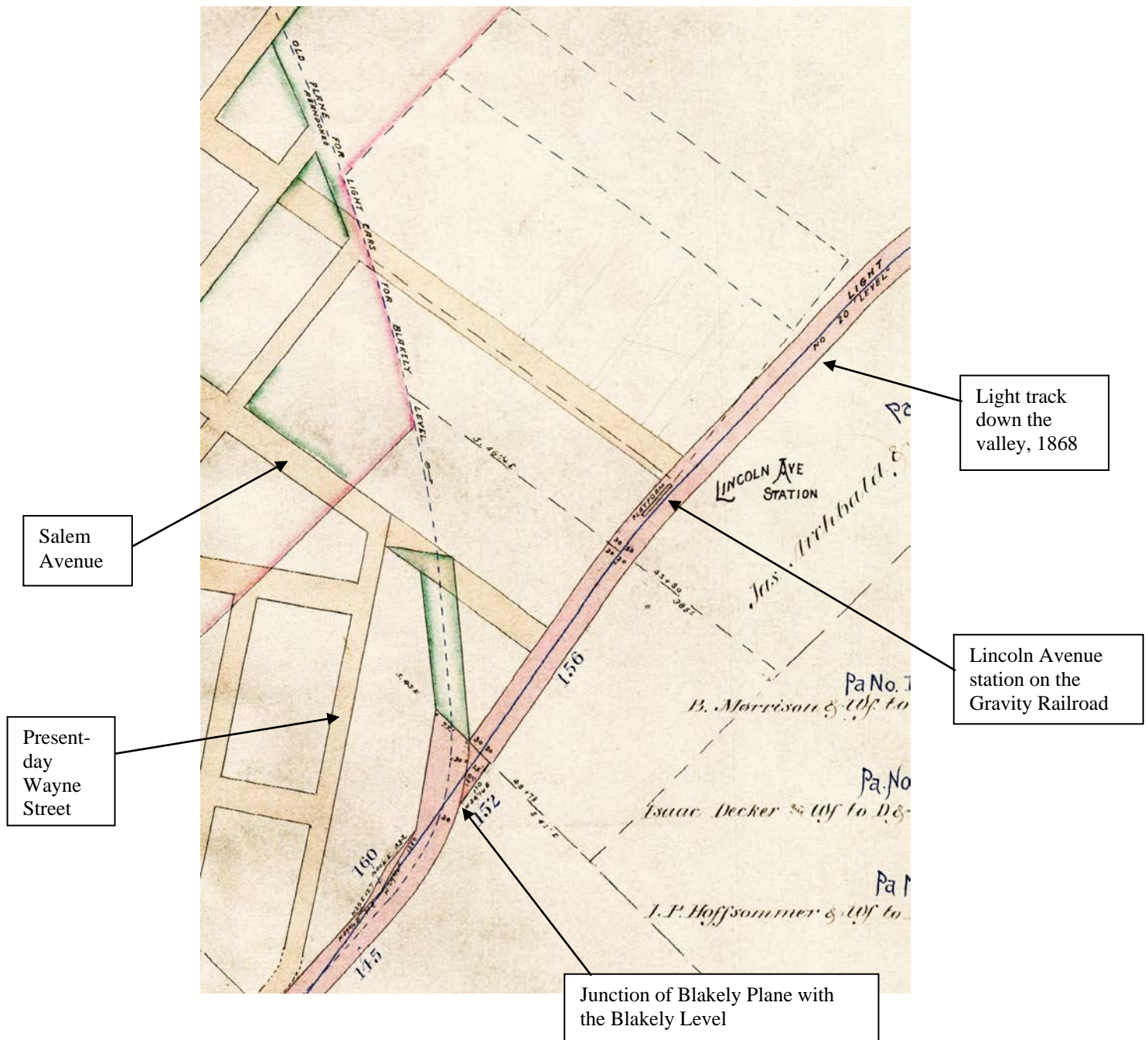


Map on p. 12 in *D&H Deeds Luzerne I.* This map illustrates the deed, pp. 1-6, dated July 28, 1825, between John Wurtz & others, Trustees, and The Delaware & Hudson Canal Company. On the map detail shown below, the location of the "Old R. R. to Blakely" is shown.

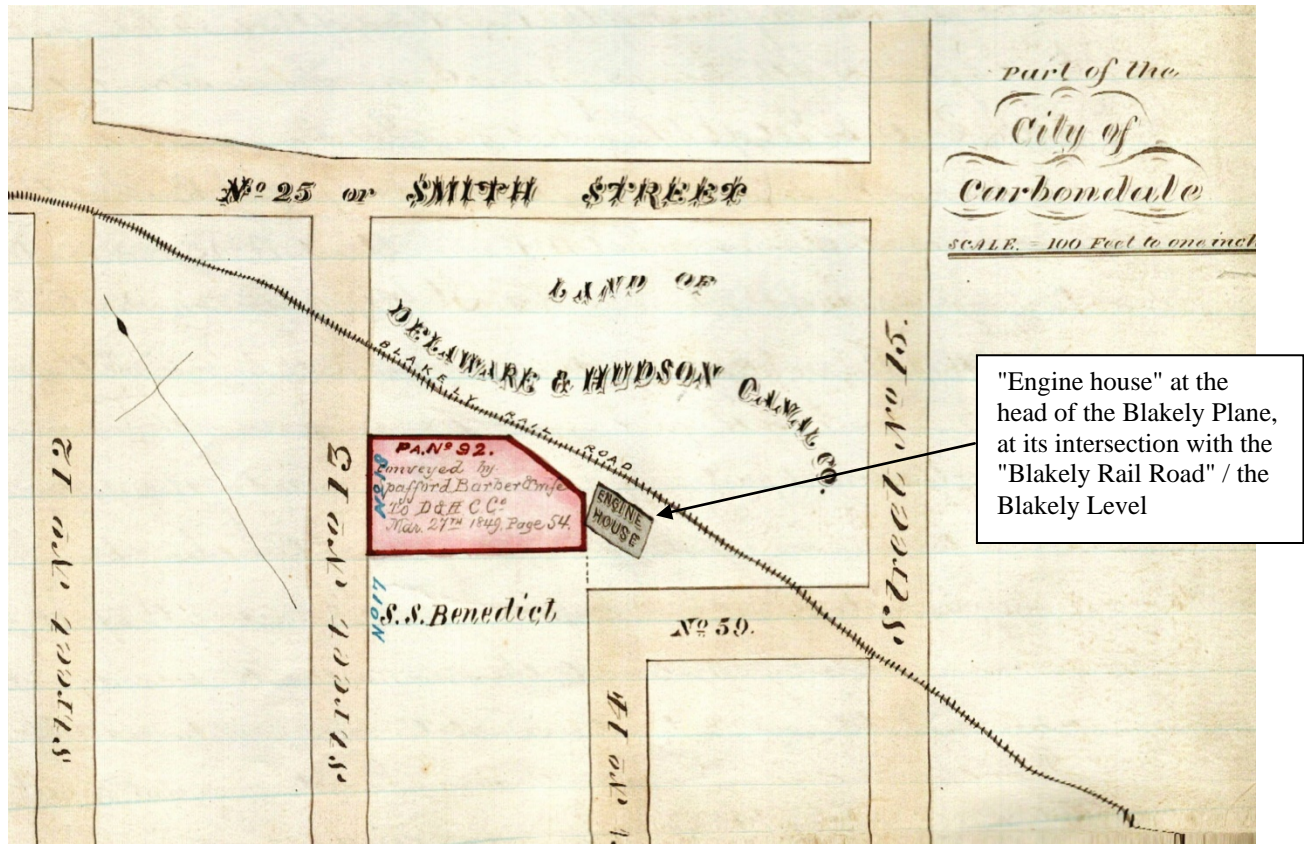
This is a larger view of the detail given immediately above.



In the detail given below from the 1895 Gravity Railroad map, we see the plane intersect what would later be known as the “Light Track” down the valley. The portion of the level to the right of the junction point, in this detail, was not there in 1846, nor was the Lincoln Avenue Station, when the Blakely plane and engine were installed.



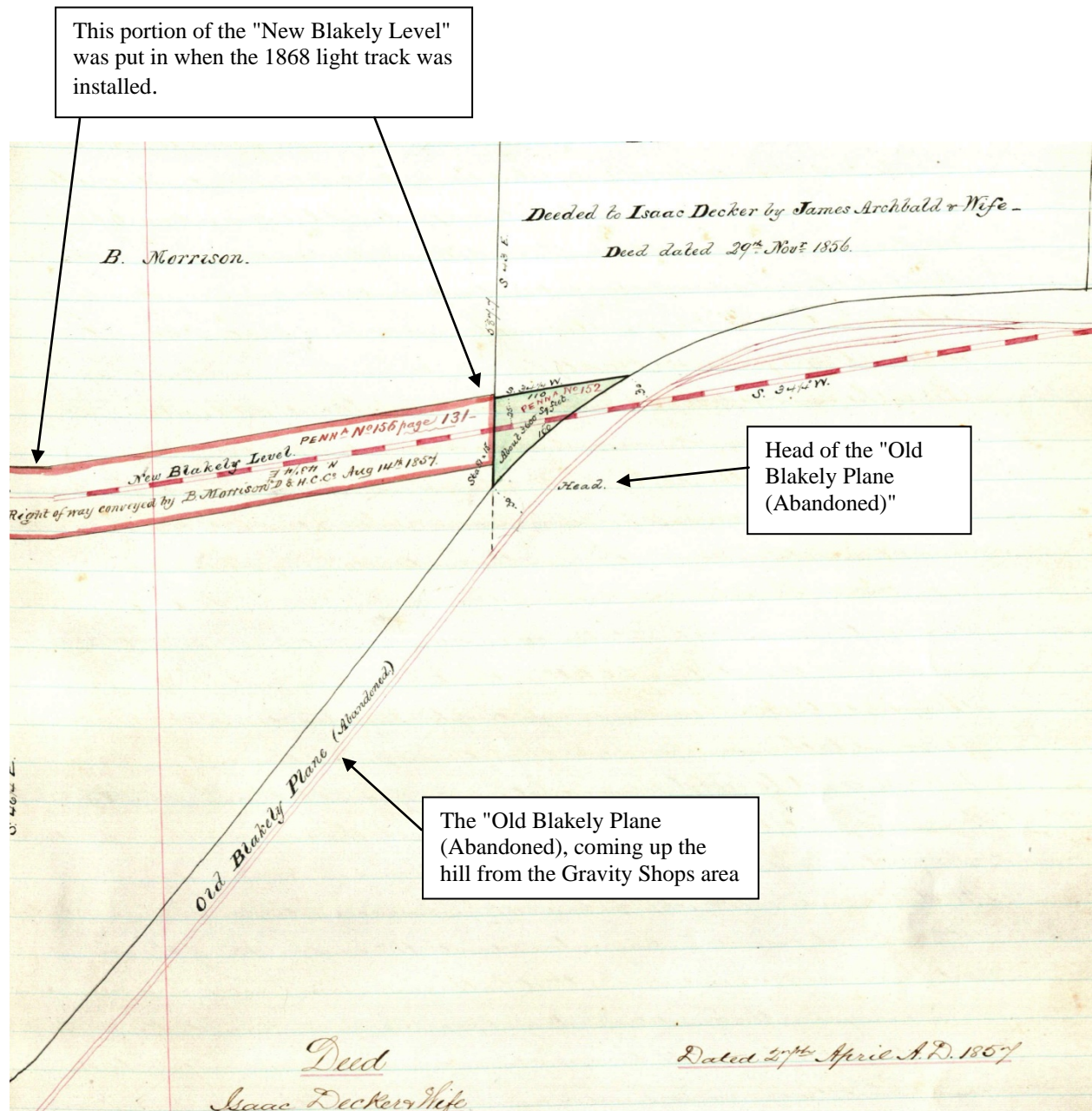
In the *D. & H Deed Book – Luzerne*, on p. 53, there is a map of part of the City of Carbondale that illustrates the deed, pp. 50-53, dated December 30, 1848, between John P. Farnham and wife and The Delaware & Hudson Canal Company, on which the Blakely Rail Road and the position of the engine house at the head of the Blakely plane are shown. Here is that map:



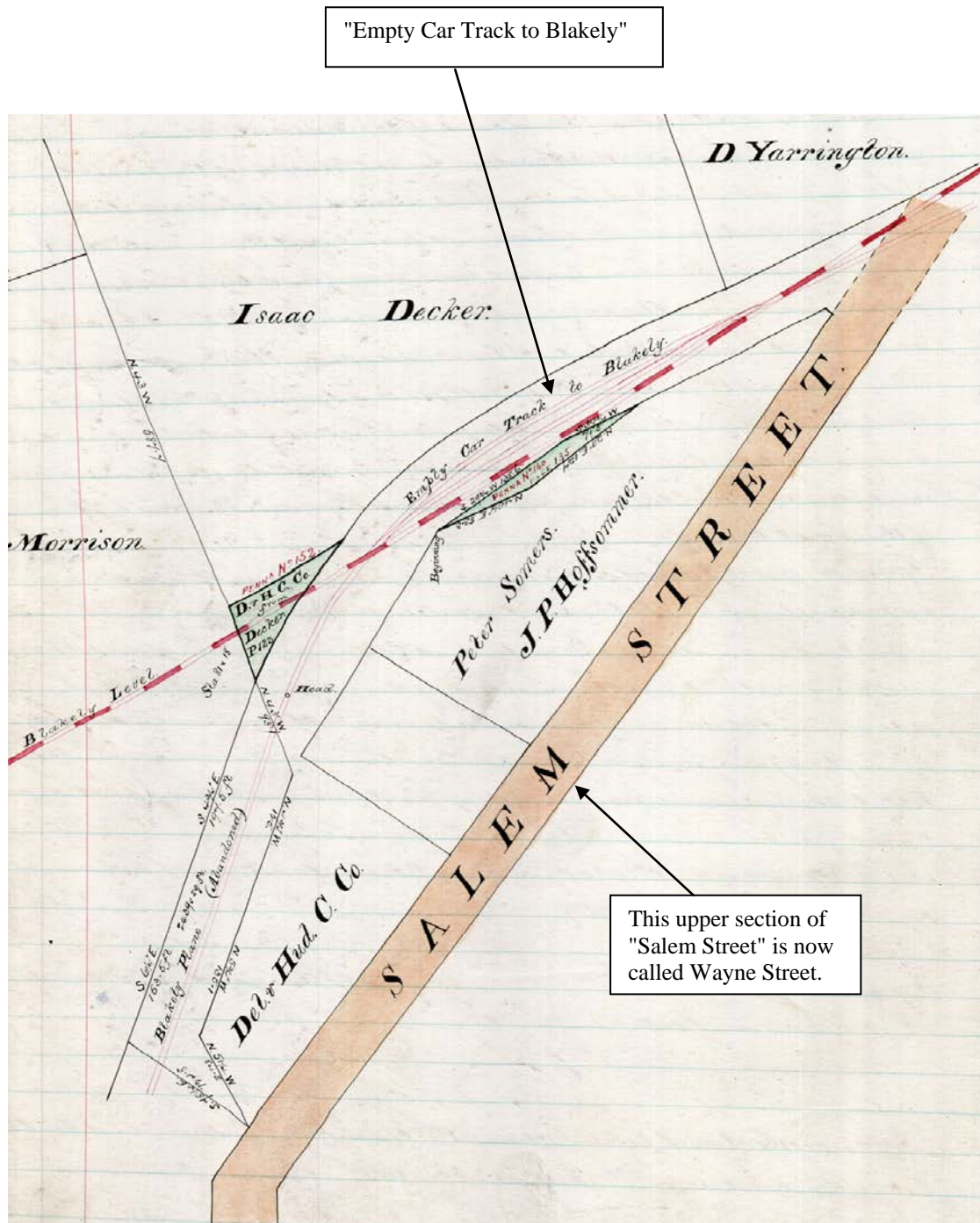
Martin Morrison and the Blakely Engine:

In the biographical portrait of Charles E. Morrison ("He's Always Been With Us") that is published in the May 1, 1928 issue (pp. 131-132, 142) of *The Delaware and Hudson Company Bulletin*, we read the following about Martin Morrison, the father of Charles Morrison: "His father, Martin Morrison, came to this country from Ireland when he was fifteen years old. He settled in Carbondale, where, for many years prior to his death, he ran 'the old Blakely engine,' about midway on the No. 1 plane of our gravity road, which was used for hoisting out of Carbondale yard light cars en route to Archbald." Martin's son, Charles, was born at the family home on Darte Avenue on July 16, 1845. Through his father, "Charles became acquainted with C. P. Wurts, then supertintendent, and it was from him that he [Charles] obtained his first position [on the D&H] which was that of carrying water for the men who were replacing the strap rail between Carbondale and Archbald with what he calls 'T' iron. That was in 1858." (p. 132)

In the *D. & H. Deed Book – Luzerne 2*, there is a map on page 123 that illustrates the deed, pp. 123-24, dated November 29, 1856, between Isaac Decker and James Archbald and wife. On that map, the Blakely Level (the portion to the left of the junction point was not there in 1846) is shown. Note that the "Old Blakely Plane (Abandoned)" and the level from that plane, going to the right (the South) are shown. The "Head" of the "Old Blakely Plane (Abandoned)," where the Blakely Engine was located, is also shown. Here is that map:



In that same deed book, on page 134 there is a map that illustrates a deed, pp. 135-36, dated November 13, 1857, between J. P. Hoffsommer and wife and The Delaware & Hudson Canal Company. On that map, the “Blakely Plane (Abandoned)” and the “Empty Car track to Blakely” are shown. The Head of the old Blakely Plane was just up from the bend in Salem Avenue as it goes up the mountain (that portion of “Salem Street” is now named “Wayne Street”). Here is that map:



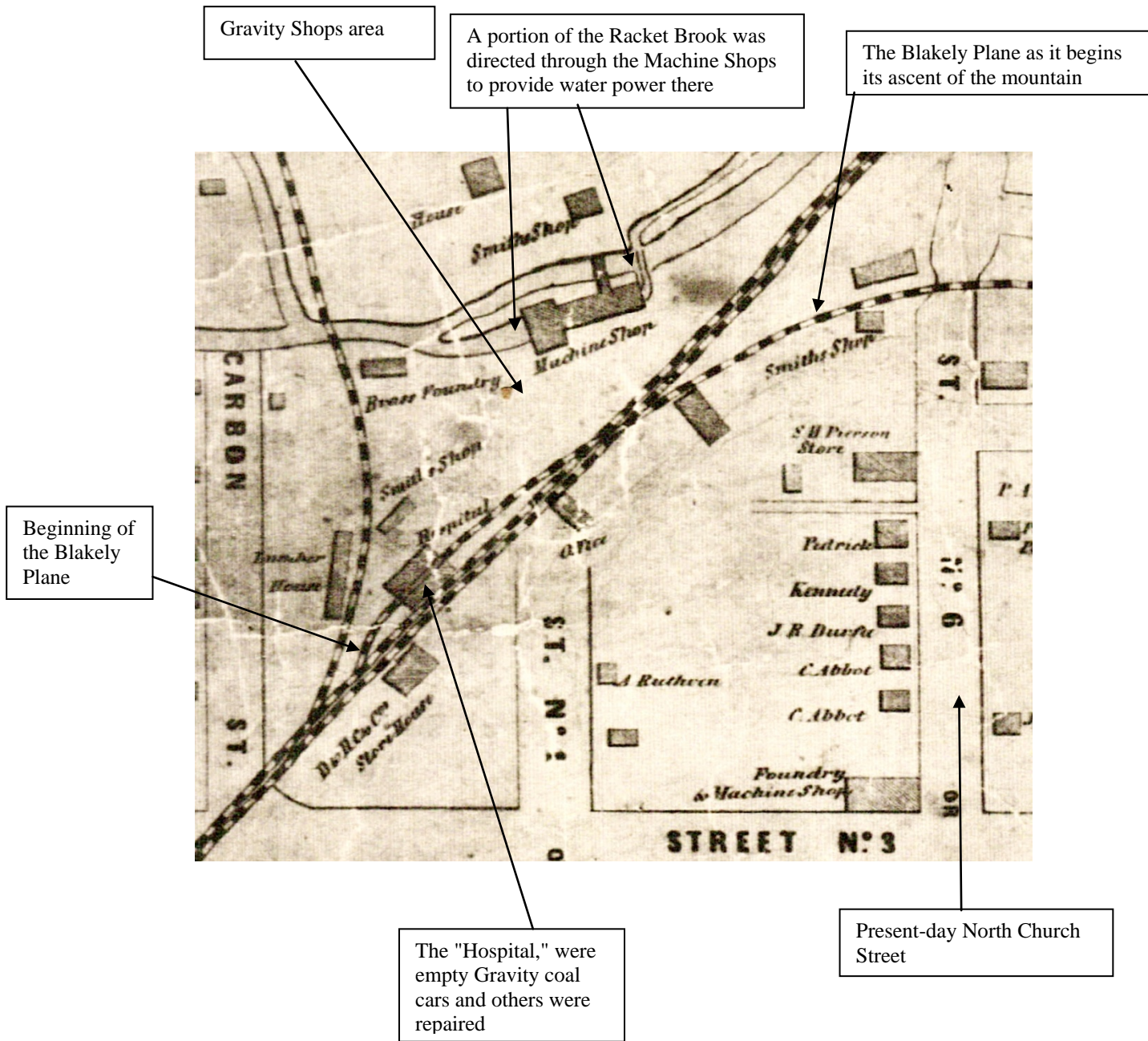
There were two engines on the Blakely Plane up the hill, one on Washington Street, and one at the top of the hill.

In the article titled "The Celebrated Gravity Road" we read: "In the early days the light track came down to where the rope barn now stands and then ran up through what is now the Convent grounds. The engine [one of the two engines on the plane] for this plane stood about the upper end of Washington street [the other engine was at the top of the hill, above "South Wayne Street]."

From the biographical portrait of Charles E. Morrison (titled "He's Always Been With Us") that is given on pages 131-132, 142 of the May 1, 1928 issue of *The Delaware and Hudson Company Bulletin*, we learn that Charles' father, Martin, came to America [probably in the early 1840s] from Ireland when he was 15 years old. "He settled in Carbondale, where, for many years prior to his death, he ran 'the old Blakely engine,' about midway on No. 1 plane [It was not No. 1 plane, rather it was the Blakely Plane, on which there were two engines at one time] of our gravity railroad, which was used for hoisting out of Carbondale yard light cars en route to Archbald" (p. 132).

The path of the Blakely Plain/Blakely Rail Road out of Carbondale up the hill to connect with the Blakely Level is clearly shown on the 1851 *Map of Village CARBONDALE Luzerne Co. Pa. Surveyed & Published by P. NUNAN*, an original copy of which is in the collection of the Carbondale Historical Society.

The line is a spur off the north track of the two tracks on the level before the foot of Plane No. 1 (see map detail given below). The spur begins just opposite the "D & H Ca. Co's Store House" and passes first through a building that is identified on the map as "Hospital." This was not a medical facility, rather a repair shop that was contiguous with the level at the foot of the North track on Plane No. 1, where any damaged Gravity cars on their return from Honesdale could be repaired before being sent on to the mines in Carbondale and environs for more coal. Empty Gravity cars entering the Blakely Plane spur passed through the Hospital so that any damaged cars could be repaired before being sent down the valley for more coal.



Note on the detail from the 1851 Carbondale map given above the following D&H buildings: "D & H Co [sic] Co's Store House, Lumber House, Hospital, Smith's Shop, Brass Foundry, Machine Shops, Smith's Shop, Office, Smith's Shop." This 1851 map is the only known record of the existence of all of these D&H buildings and their exact location in 1851 in the area at the foot of Plane No. 1. Note that a raceway from the Racket Brook passed through the Machine Shops and that an extension from the Machine Shops extended out over the Racket Brook, making it possible to set up one or more waterwheels for power in the Machine Shops.

The Blakely Plane crossed both tracks on the level at the foot of Plane No. 1 just east of the D&H office (in 1851) and curved to the south, passing in front of the "Smith's Shop" (one of three D&H Smith's Shops in existence at the time, the other two were located on the north side of the tracks on the level before the foot of Plane No. 1), before crossing "Street No. 6 or N. Church Street." The track began its ascent of the hill on the south side of "Smith Street" (present day Garfield Avenue). The track ascended the hill in a gradual arc to the southeast to the top of the hill just above "South Wayne Street," where the engine house at the head of the plane was located.

The plane passed through an "Engine House" that was located in the middle of "St. No. 14 or N. Washington Street." This engine house was the power source that got the empty cars from the foot of the plane to "St. No. 14 or N. Washington Street." From that point the empty cars were pulled up the remaining portion of the plane by the engine that was located at the top of the hill, where the Blakely Level (to the south) began. On its upward ascent, the plane passed through a portion of "Sweets Park" (later to become the property of C. P. Wurts and then E. E. Hendrick), crossing "Street No. 3 or Foundry Street" (present day Lincoln Avenue), at its intersection with "N. High Street," before crossing "N. Archibald Street" and North Wayne St." to the top of the hill.

Three views of the Blakely Plane:

The entire plane:

The North Washington Street engine on the Blakely Plane

Foot of the Blakely plane

Head of the Blakely plane



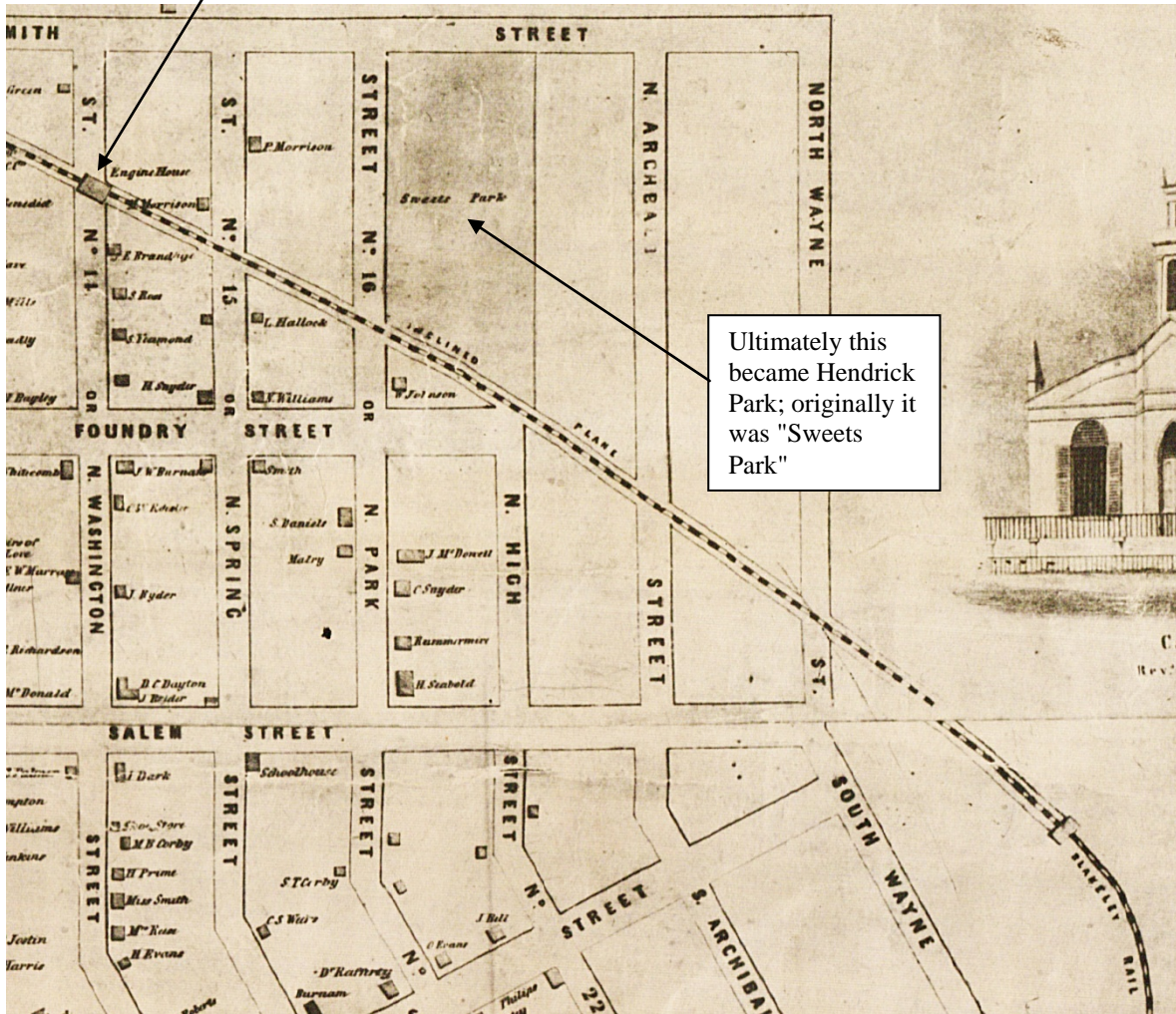
From the beginning of the plane to "St. No. 14 or N. Washington Street": close up



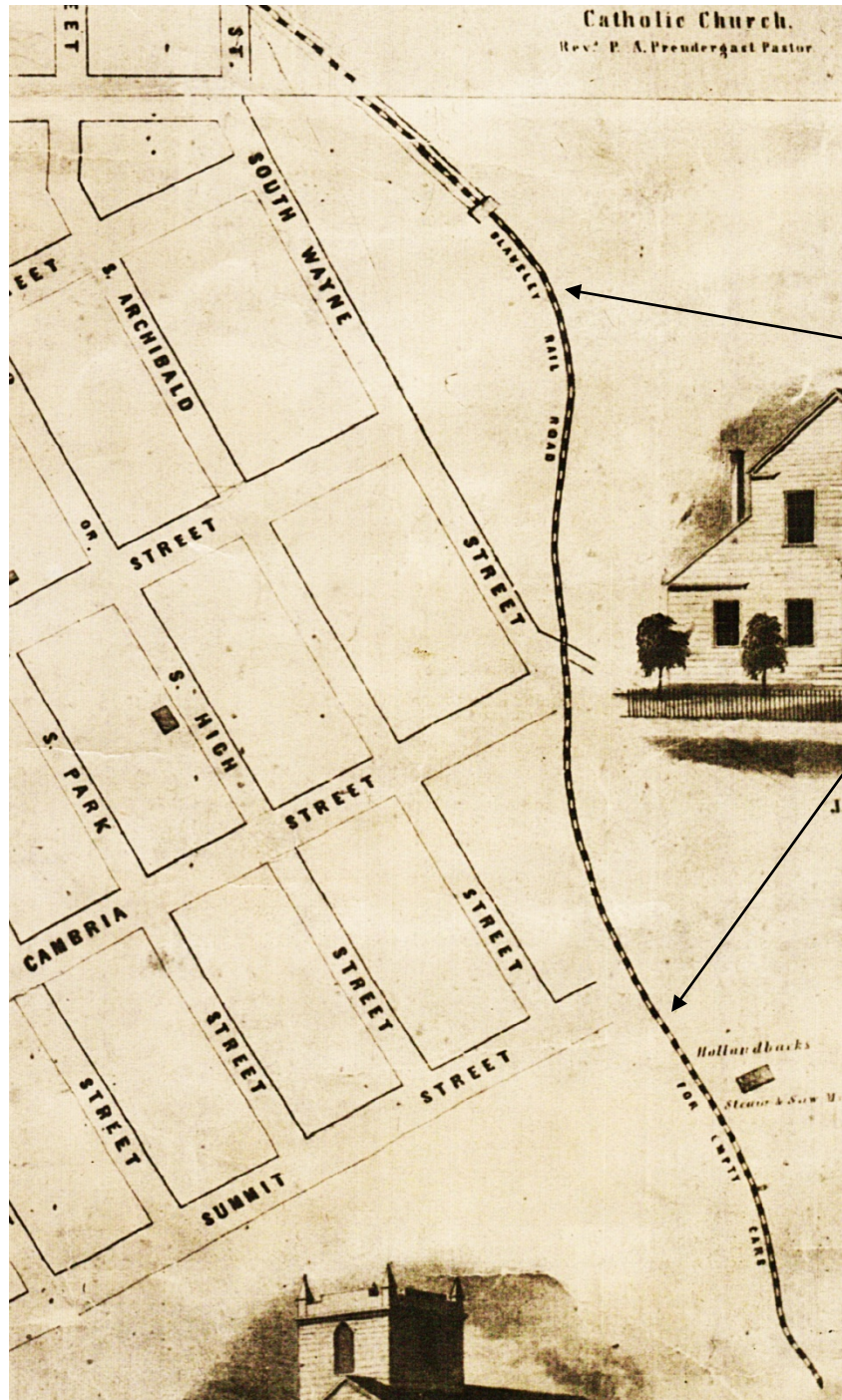
From "St. No. 14 or N. Washington Street" to the head of the plane: close up

The engine half way up
the Blakely Plane

Ultimately this
became Hendrick
Park; originally it
was "Sweets
Park"

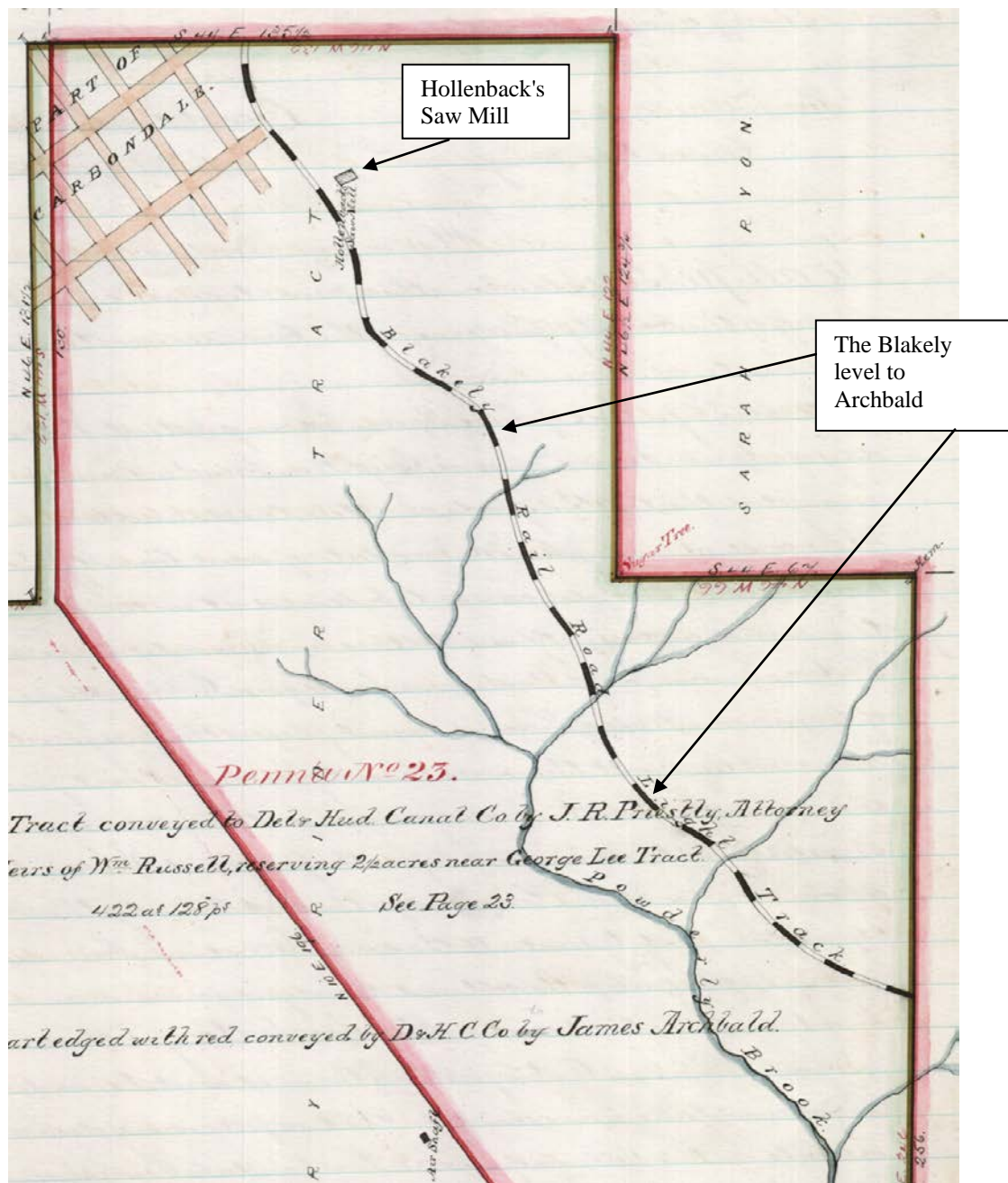


The beginning of the Blakely Level, from the head of the Blakely Plane to Archbald, is shown on the detail from the 1851 Carbondale Map:

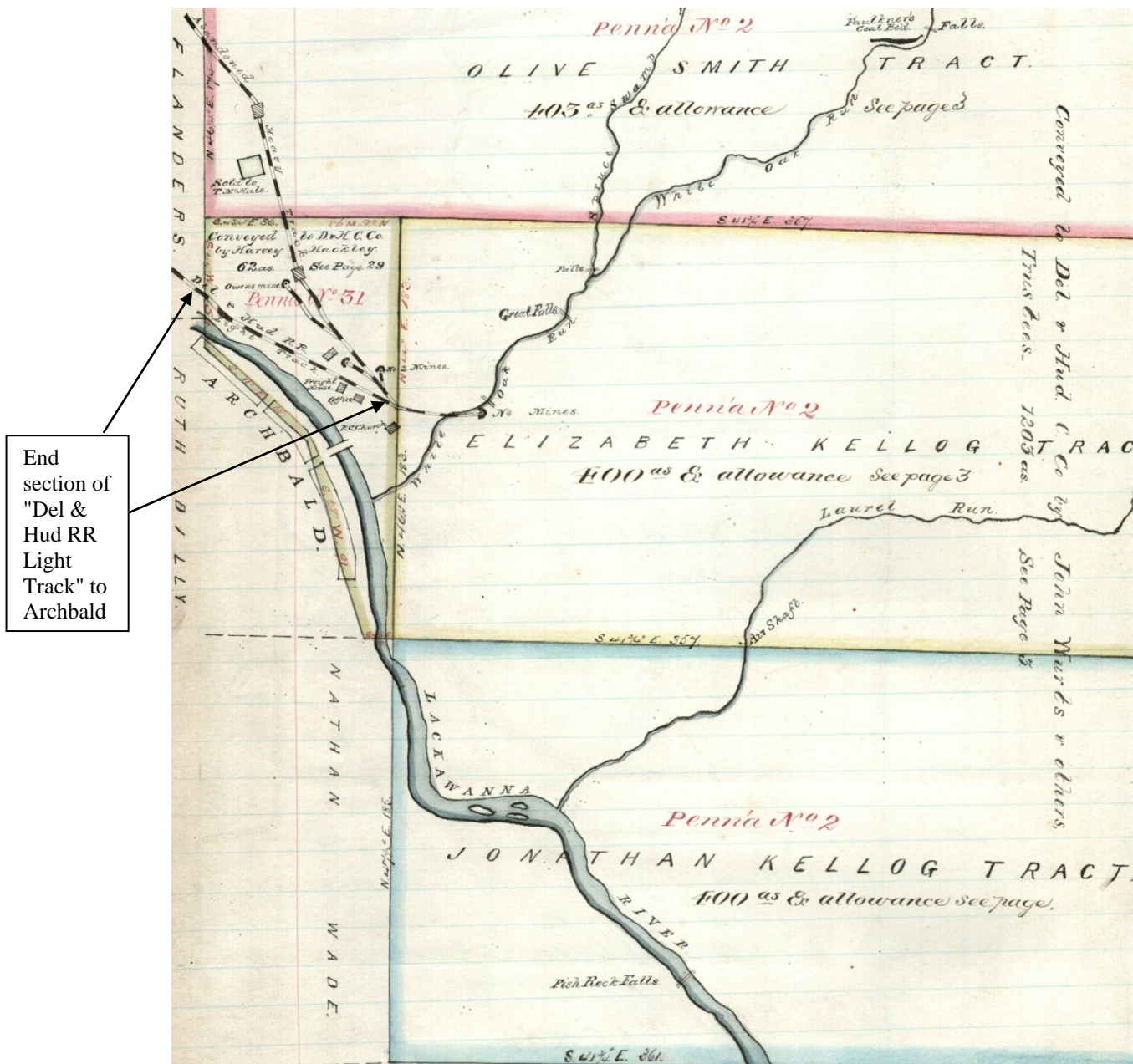


The level, going south, from the head of the Blakely Plane

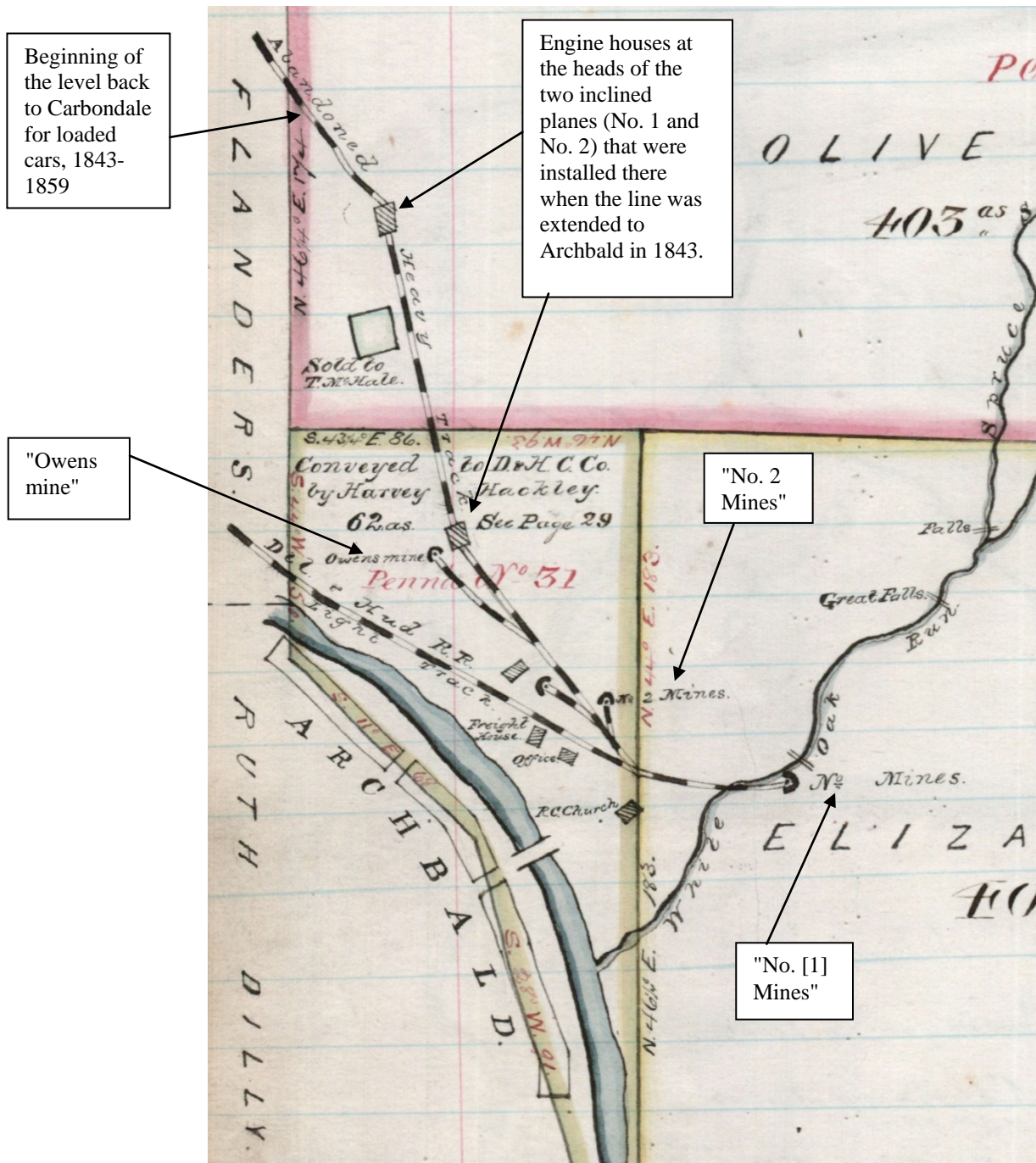
In the *D. & H Deed Book – Luzerne*, on page 25, there is a map that illustrates the deed, pp. 23-24, dated August 29, 1839, between Joseph R. Priestly Atty in fact and The Delaware & Hudson Canal Company. On that map the Blakely Rail Road Light Track, as it exits Carbondale and heads down the valley, is shown, as is the location of Hollenback's Saw Mill. Here is that map:



In the *D. & H. Deed Book – Luzerne*, on page 8, there is a map, pp. 7-13, that illustrates the deed, pp. 1-6, dated July 28, 1825, between John Wurtz and Other Trustees and The Delaware & Hudson Canal Company. On that map, the community of Archbald is shown after the railroad was extended there. On that map, we see the end of the Blakely level in 1846, marked on the map “Del & Hud RR / Light Track,” just to the north of the White Oak Run. Here is that map:



Here is a closer look at that map:



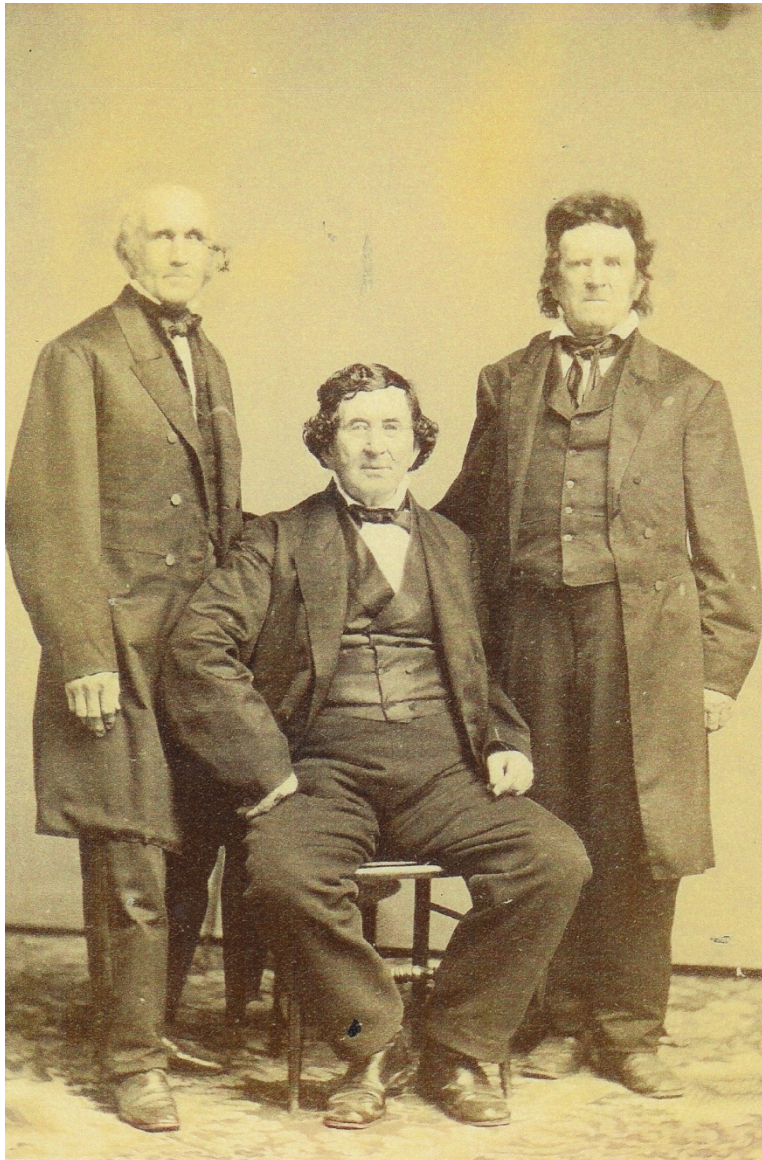
At this point, the empty coal cars were loaded with coal from the Archbald mines and pulled up the mountain by means of two inclined planes (No. 1 and No. 2) that are shown, but not named, on the "Abandoned Heavy Track" on the above map. These two planes are not Planes No. 26 and 27, as Dr. Edward Steers affirms. ("The Delaware & Hudson Canal Company's Gravity Railroad," *Proceedings of the Canal History and Technology Symposium*, Volume II, March 26, 1983, pp. 129-203).

P. A. Philbin describes Planes No. 1 and 2 at Archbald, which were built under the direction of Gideon Frothingham:

These two planes pre-date Planes 26 and 27. P. A. Philbin, in the paper that he read on September 4, 1915 at the meeting of The Gravity Men's Association, says: "In the Spring of 1846, the old No. 1 mine at Archbald was opened and the coal from this mine was hoisted up two planes, known as No. 1 and No. 2, at the top of the mountain to the north of Archbald and the cars then went down the other side of the mountain of their own momentum, to the foot of Davis' plane in Carbondale. This mine opening was on the edge of White Oak creek about four hundred feet east of the Delaware & Hudson passenger railway. A single track ran from it to the foot of No. 1 plane, where the White Oak scale stood, while the head of the plane was opposite the Jordan residence on Hill street. The foot of No. 2 was about two hundred feet north of the head of No. 1 while the head of No. 2 was back of the Louis Otto home. The first engineer at No. 1 was Thomas Sayers, the first at No. 2 was George Simpson, later a prominent coal operator.[See Eaton & Co.] The location of these old planes, which were an important part of the Gravity system from 1846 to 1859, may be still traced amid the shrubbery under the ledge of rock to the east of Hill street. / **The Old Planes.** / The planes were built by Patrick Gilmartin, the first settler and a prominent citizen of Archbald in the early days, under the direction of Engineer Gideon Frothingham.[emphasis added]* Not the least of the builder's troubles were the rattlesnakes with which the locality abounded. Nearly all the workmen were recently of the Emerald Isle and they had a particular abhorrence of 'sarpints.' The sight or sound of one would demoralize the force. On one occasion a blast fired in the early Spring uncovered a den of twenty-four rattlers hibernating under a dislodged rock. One of the workmen was bold enough to break them in pieces as he would so many twigs. / The line was finished in the Summer of 1846 and the first runners over it were Luke Williams, Jerry Sherry, Conrad Coon, Phil Franklin, Ike Madison, and Jonathan and Owen Jones. Later runners over the line in the 50's who are still living were Edward Craig, of Archbald and Patrick Boland, of Scranton, who is still in active duty as tipstaff of the county court. Mr. Boland in 1859 ran the first trip of cars around the 'buckhorn,' as the curved stretch of track between planes C and D was called."

*Gideon Frothingham was James Archbald's brother in law. (Gideon's sister Sarah married James Archbald.). Gideon was the third child of Thomas and Elizabeth (Frost) Frothingham. He was born August 6, 1794 in Hudson, NY, and died January 30, 1871 in Scranton. He was a Civil Engineer and the Resident Engineer for James Archbald's railroad projects. He was the third mayor of Carbondale. He was the engineer in charge of building the original two Gravity planes in Archbald.

Shown in this photograph are three of the five children of Thomas and Elizabeth (Frost) Frothingham. Gideon, seated, is shown here with John (on the left) and William. Their siblings, Augustus and Sarah, are not shown here.



John, Gideon, and William Frothingham

“No [1] Mines,” “No. 2 Mines,” and “Owens Mine” are shown on the map detail given above, as are Planes 1 and 2 (the engine houses are marked by small square boxes on the “Abandoned Heavy Track”) on the “Abandoned Heavy Track.” The portion of the track above which the word “Abandoned” is given is the beginning of the 7-mile level from the head of Plane No. 2 to Carbondale.

At the foot of Old No. 1 on the above map, the “loaded” and the “light” tracks in Archbald came together in the period 1846-1859. Structurally, this is exactly the same thing that happened in Olyphant at the foot of Plane G in 1859: light track going south along the Lackawanna River to a junction with the loaded track, up which loaded cars are hauled to begin their journey north and to market.

More on Planes No. 1 and No. 2 by P. A. Philbin:

More on Planes No. 1 and No. 2 from *Old-Time Archbald. Early Institutions and Industries of the Town. Important Happenings in Its History*. Compiled and Edited by Hon. P. A. Philbin, Prof. James H. White, William D. McHale and F. A. Lally. 1915: Citizen Press, Archbald, Pa., *Archbald in 1850*, pp. 10-14. Page 13: "Many of the changes which followed each other in rapid succession on the west side of town were mainly due to the openings made in the rich field of anthracite underlying the Hackley estate. / The firm of Eaton and Co., whose good fortune it was to secure an option on this vast field of anthracite had not yet been formed. The individual members of this eminently successful family was each following his accustomed avocation totally unconscious of the great measure of success which was to attend his first venture in coal operations. The late Alva Eaton, one of the most brainy and energetic men Archibald ever had for a resident, was at this time a tracklayer in the mines of the Delaware and Hudson Canal Co., and it can be truthfully said that to the ability, foresight and energy of Mr. Eaton much of the success and prosperity of the firm was due. The late George Simpson, also an active member of this company was at this time a stationary engineer at old No. 1 engine on the buff above White Oak breaker. The late Edward Jones, then in the employ of the Delaware & Hudson Canal Co., in the capacity of foreman and mine superintendent, together with Dr. Wescott, a resident physician on South Main street, composed the company in its entirety. . ."

More on Planes Nos. 1 and 2 by Ed Casey (May 13, 2013): "Planes Nos. 1 and 2 were on the east side of Hill Street. They started at the mouth of the mine and then went up No. 5 hill."

Philbin describes the novel method used to deliver coal into the cars of the D&H:

" . . . The first openings were made on the west side during the summer of 1846 and a novel method was adopted for delivering the coal into the cars of the Delaware and Hudson Canal Co. An incline plane running parallel with the openings, was constructed along the hill side. This plane had a double track. A car was controlled in its descent by a wheel and brake at the head. A

weighted truck in its descent was the motive power that drew an empty car on the opposite track alternately to each of the small supply chutes into which the mine cars were dumped at the different openings. This car being loaded somewhat heavier than the truck was permitted to descend to the large chutes in the rear of what is now the Dickson Store. Here the coal was loaded into gravity cars and drawn by horses over a trestling to the foot of No. 1 plane. This trestling crossed the river in front of Jonas Berger's building, the track passing near the residence of P. J. O'Rourke at the foot of Hill street. This plane was continued until the spring of 1859 when the opening of the road to Olyphant brought about changes that were merely but forerunners of still greater ones occasioned by the erection of the coal breaker in 1860. With the advent of the coal breaker and the subsequent waste in the grinding and assorting of the coal into marketable sizes also commenced the piling up of those miniature mountains of culm and other refuse, that so effectually destroys every vestige of rural beauty and has a tendency to shut out the light of day."

The new Heavy, or Loaded, track up the mountain out of Archbald (Planes 26 and 27) was constructed a little to the North of Planes No. 1 and 2 when the Gravity Railroad was extended to Olyphant in 1859-1860. At that time, Planes No. 1 and No. 2 were abandoned. We will look at Planes No. 26 and 27 in the unit on the 1858 configuration.

When the 1866 Light Track Was Put In:

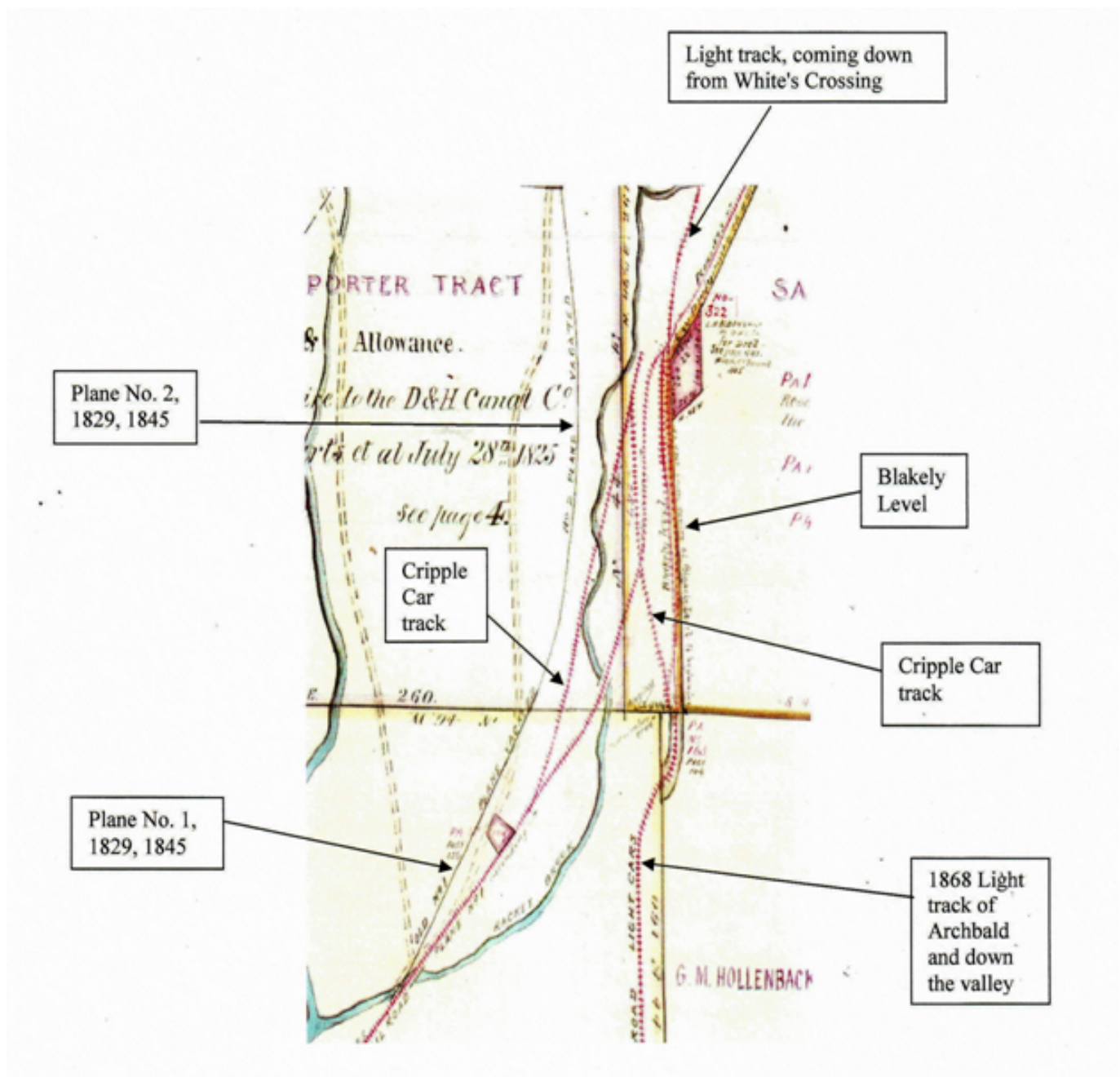
Blakely Level, 1866-1899: The light track was installed from Farview down around Shepherd's Crook and on down the valley in 1866.

At the head of No. 2, the new light track and the new Blakely Level connected. Here is what happened. The Blakely engine at the head of the Blakely Plane (near the site of the Lincoln Avenue station) was closed/done away with. The existing level on the Blakely Plane was extended to the North and connected up to the new Light Track (coming down from Shepherd's Crook). The "new" Blakely Level was thus created—from the Head of No. 2 down the valley to Archbald (the "new" Blakely Level incorporated all of the "old" Blakely Level + the section that extended back to the North from the site of the former Blakely Engine to the head of No. 2.).

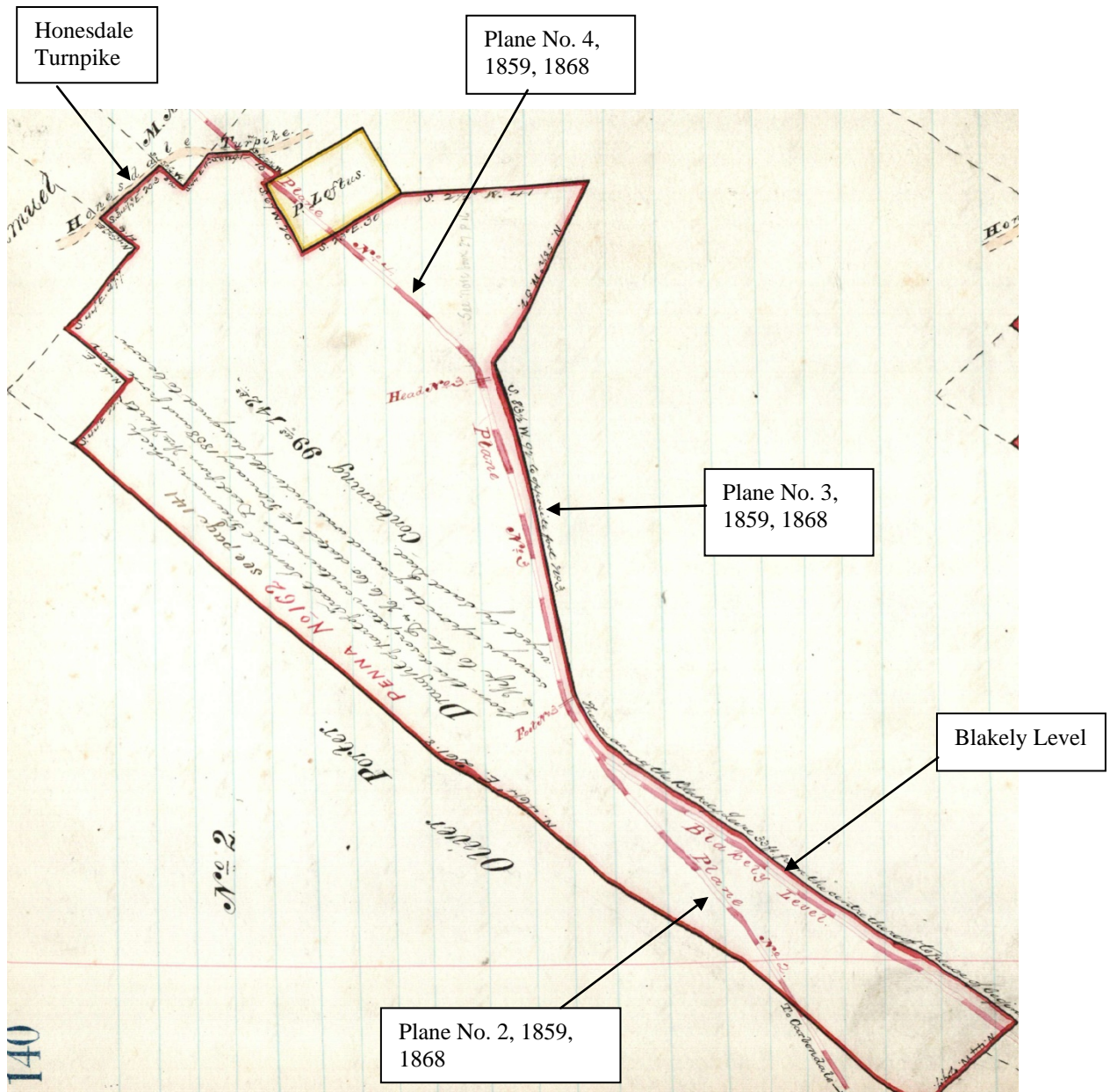
The "new" Blakely Level functioned without a steam engine. The motive power to get the cars to the beginning of the level was gravity (as the cars came down from Farview). All other levels on the Gravity Railroad functioned with steam engines at the head of the plane from which the level descended.

The 1868 light track through this area, into which the Blakely Level was incorporated, is shown on the map on page 257 of *D. & H. Deeds, Luzerne County*, which illustrates the deed, pp. 255-256, dated June 21, 1861, between Gordon F. Mason and others and the Delaware and Hudson Canal Company. A detail from that map is given below.

What is the inverted “Y” to the west of the beginning of the “New” Blakely Level? It is the Cripple Car track.



In the *D. & H. Deed Book – Luzerne 2*, on page 140, there is a map that illustrates the deed, pp 141-43, dated February 1, 1858, between William Wurts and wife and The Delaware & Hudson Canal Company. On that map, Planes 2, 3 (head and foot), and 4 (Honesdale Turnpike crossed in middle of Plane 4), as well as the Blakely Level (which began at the foot of No. 3/end of the level on No. 2t) are shown. Here is that extraordinary map:

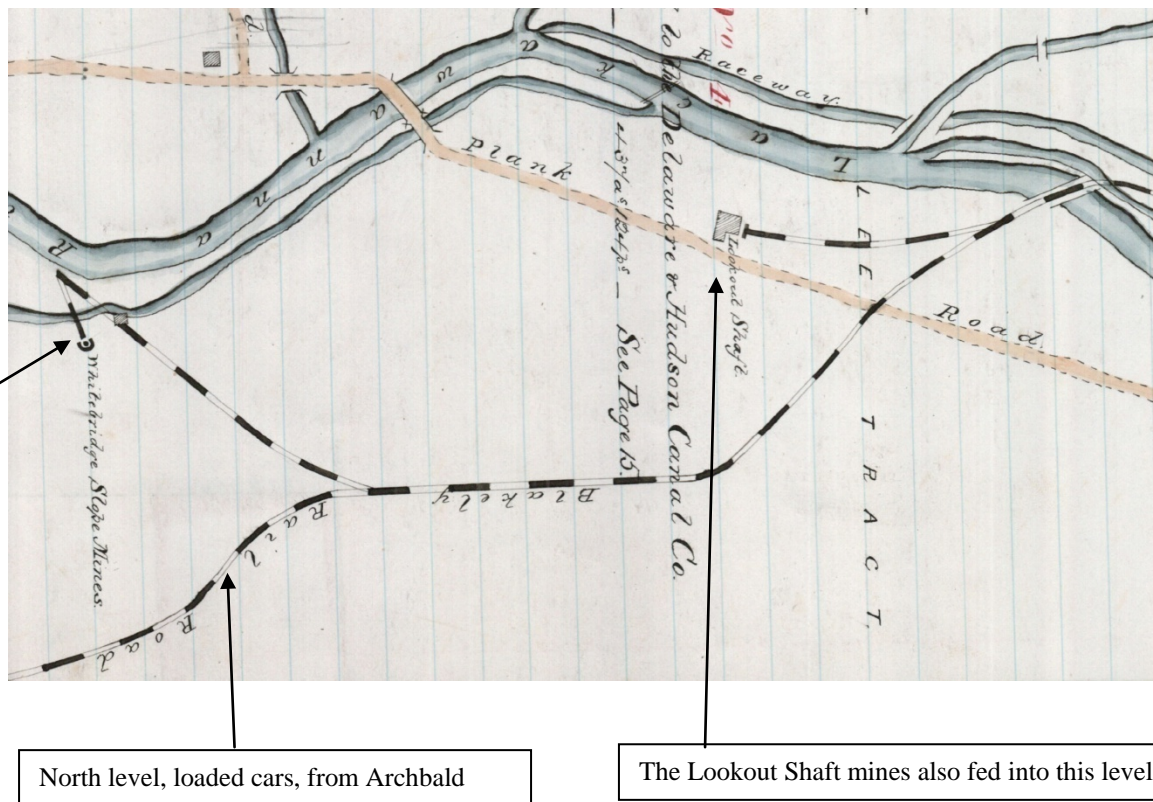


Old No. 1, Old No. 2, North Level

The level, going north, from the head of "Old Plane No. 2" in Archbald:

The 7-mile level from the head of Plane No. 2 to Carbondale came down the hill into Carbondale, passing through what would later be called the Lookout section and then on down to the valley floor and the foot of the Davies plane in Carbondale, where the loaded cars would be inserted into the system. This level (from Archbald back to Carbondale) is also identified on some maps as the "Blakely Rail Road" (as was the line for light cars from the engine house above "South Wayne Street" to Archbald).

The section of this level in the Lookout area is shown on the map on page 14 of *D&H Deeds Luzerne I*. That map illustrates the deed, pp. 15-16, dated November 1, 1825, between John Wurts and The Delaware & Hudson Canal Company. On the map below, the level from Archbald descends from lower left to upper right. "Blakely Rail Road" (those words here shown upside down) should here be interpreted to mean: "the line for loaded cars from Archbald back into Carbondale, i. e., the rail line from the top of the hill in Archbald to the valley floor in Carbondale."

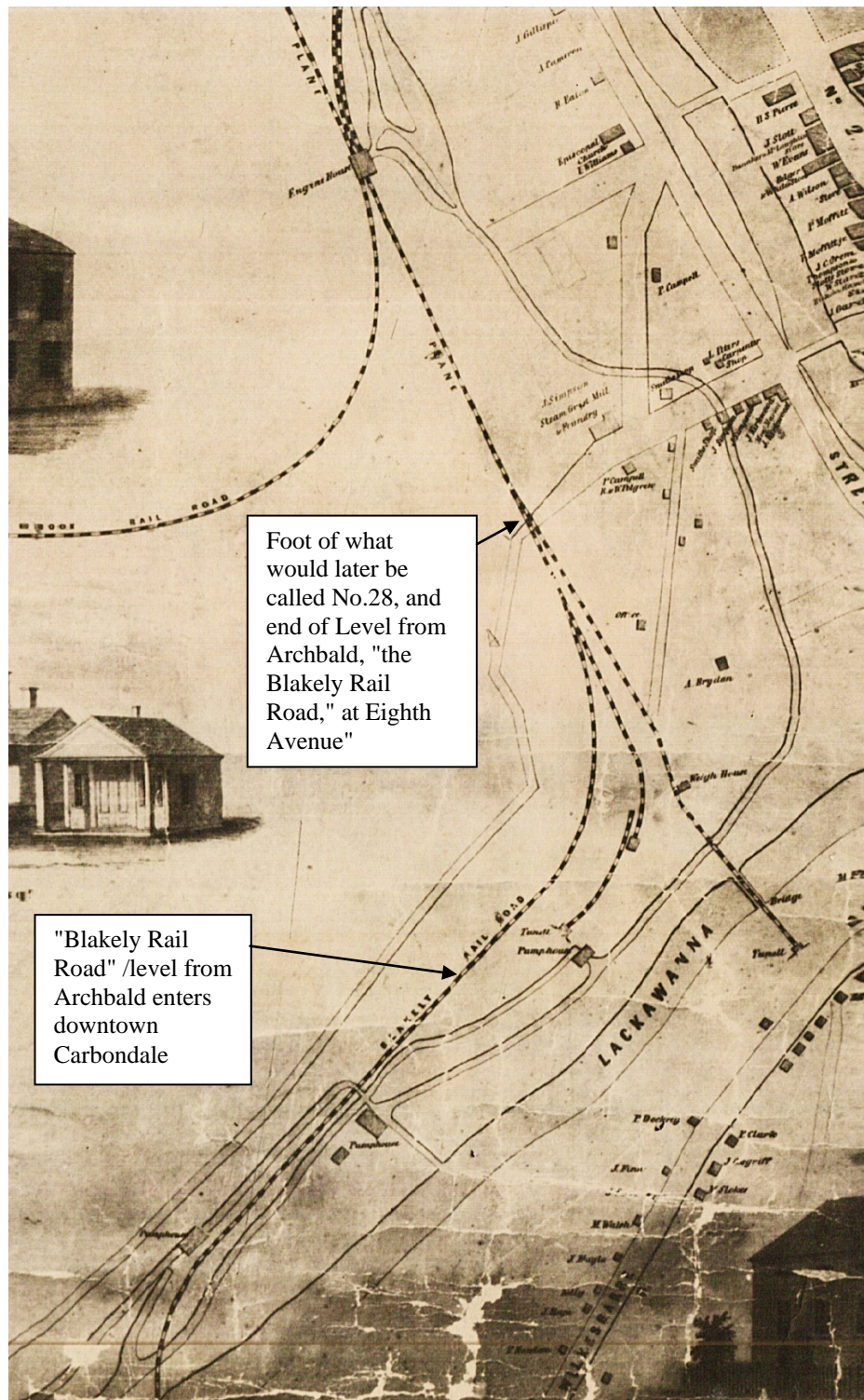


The end of this level from Archbald to Carbondale was at Eighth Avenue in Carbondale, as shown by the single blue line that runs vertically from bottom to top in the detail given below.

Foot of level from Archbald and foot of
Plane 28 at Eighth Avenue in Carbondale



The end of the level for loaded cars from the top of the mountain at Archbald back to Carbondale is also shown on the detail given below from the 1851 map of Carbondale, where it is marked "Blakely Rail Road." The end of this level was at Eighth Avenue in Carbondale.



This level back to Carbondale from the top of the mountain at Archbald would, after the extension of the line to Olyphant, become known as Level 27. On that level, it is our contention, in the 1870s, Hensel took the well known photo of "McGarry Avenue." It is our contention that this photograph was taken in the Bushwick section of Carbondale Township/Gordon Avenue area. We include this material here, as the path of this level back to Carbondale was not significantly altered (we believe) following its initial postulation.

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McGarry Avenue

On the Level back to Carbondale (later known as No. 27 Level)

McGarry Avenue: View No. 1166 in the L. Hensel series titled "A Ride over the Del. & Hud. Gravity Road into the Coal Regions, Photographed and Published by L. Hensel, Port Jervis, N. Y. is titled "McGarry Avenue on the Gravity Road" (shown here). This is the last of the 66 views of the Gravity Railroad in this photographic series that was published in 1879 by L. Hensel. Hensel's photograph of "McGarry Avenue on the Gravity Road" is the only instance in all of the published information on the D&H Gravity Railroad where any reference is made to McGarry Avenue.

McGarry Brothers work for the D&H:

"The well known McGarry Bro's., have taken the contract of delivering the D. & H. coal in and around Carbondale." (*Carbondale Advance*, August 10, 1878, p. 3).

The Photograph: One looks up an inclined plane, down which travels a flat-bed car that is loaded with lumber; two men are riding on the lumber; a sprague can be seen in one of the wheels on the left. As one looks up the inclined plane, there is a stockade fence to the left of the tracks. Also, the telegraph line runs along the left side of the incline. There are no signs that a hoisting cable ever went "up" this incline, which supports the argument that it was a down incline/level.

McGarry Avenue: View No. 1166 in the L. Hensel series titled “A Ride over the Del. & Hud. Gravity Road into the Coal Regions, Photographed and Published by L. Hensel, Port Jervis, N. Y. is titled “McGarry Avenue on the Gravity Road”



The question which arises, naturally, is this: Where was McGarry Avenue on the Gravity Railroad? It is our contention that McGarry Avenue, so called, on the Gravity Railroad was somewhere on the long level between the head of Plane No. 27 and the foot of Plane 28.

In support of the argument that this McGarry Avenue photograph is on the level between Plane 27 and the foot of Plane 28 is the fact that the level in question is the last bit of track at the end of the complete circuit of the Gravity Railroad through all 27 planes back to the foot of Plane 28. A photograph of McGarry Avenue (Stereoview No. 1166) at the end of the Hensel series is a very logical place to put a photograph of that portion of the roadbed that is the end of the ride on the Gravity Railroad.

The level between the head of Plane No. 27 (altitude 1,228 feet), also known as Plane A, extended from Archbald to the foot of Plane 28 in Carbondale. In its trajectory northward, this

long “level,” which began on the east mountain above Archbald, descended, in a long arc, through the Bushwick section of Carbondale township and entered the city of Carbondale, at Lookout Junction, to the west of the D&H Valley Road (locomotive main line tracks), and from there to the bottom of Plane No. 28.

On page 18 of the April 1930 *Sanborn Map of Carbondale*, on which a large portion of Carbondale’s West Side is shown, there is a McGarry Avenue that runs between Ontario Street and West Seventh Avenue. The Gravity Railroad never passed through the area where McGarry Avenue on Carbondale’s West Side was located (pre-Mine Fire days), which rules out the possibility that the photograph in question was taken on the site of the avenue in question.

On July 28, 2008, John Buberniak and I talked further about the possible location where this Hensel view was taken.

We discovered that in the *Carbondale City Directory for 1895-96*, page 121, there are nine McGarry listings. Five of those listings are for members of the McGarry family who resided at 200 Powderly Street in Carbondale Township. They are:

McGarry Bridget, h 200 Powderly

McGarry Henry, laborer, res 200 Powderly

McGarry James F, driver, 200 Powderly

McGarry Jennie, tailoress, res 200 Powderly

McGarry William, driver, res 200 Powderly

200 Powderly Street is located in Carbondale Township in the area through which passed the level between the head of Plane No. 27 and the foot of Plane No. 28. The Hensel photograph must surely have been taken of a portion of the roadbed that passed through the immediate area where the McGarry family probably lived in Carbondale Township in 1879 when the Hensel photograph was taken, and where they definitely lived at the time the *Carbondale City Directory for 1895-96* was produced.

In the August 10, 1878 issue, p. 3, of the *Carbondale Advance*, we read: "The well-known McGarry Bro's., have taken the contract of delivering the D. & H. coal in and around Carbondale."

Archbald at the time of the 1845 Configuration and Later

Scranton and Down the Valley, 1846:

"While the Delaware and Hudson Canal at Honesdale was alluring anthracite from the mines at Carbondale to tide water equal to the full measure of demand, not a ton from the Scranton region as late as 1846 was transported over the mountain or down the Valley save by sled or wagon load. Dunmore was silent with its single private mine, Scranton without even a Post Office of its own, mined no coal but for itself; Pittston with the richest coal area in America stood aloof, enjoying the doubtless navigation of the shallow canal and river flowing through it. Railroads were surveyed, chartered, abandoned." *Hollister*, unpublished typescript, p. 119

Pioneer Settlers in Archbald:

"In 1841, the first log house in present-day Archbald was erected by a man named Anderson where the Dutch Hill School now (1915) stands. At that time the first turnpike or stage road extending from Providence (then Razorville) to Carbondale passed through the Welsh settlement on the Ridge, now the Eynon section of Archbald borough. The first settlers in Archbald were Welsh emigrants [farmers] who came here in 1831 and settled on the "Ridge." For many years the "Ridge" was a distinctively Welsh settlement. [When coal was discovered under their farms, these early settlers sold their lands to the Tinkelpaugh Coal Company.] In 1846 White Oak mine was opened and the gravity railroad extended to Archbald. The name of the post office was White Oak Run. It was subsequently changed to Archbald by Alvar Eaton in honor of his friend, Hon. James Archbald." Paper read by P. A. Philbin on September 4, 1915 at the Gravity employees reunion.

Hollister's Description of Archbald:

In an article titled "Life in Lackawanna" by Dr. H. Hollister that was published in the *Scranton Truth* (included in the Gritman scrapbook), we read: "**WHITE OAK RUN.** / White Oak Run, or Wagner's Gap, now Archbald, was the wildest part along the Lackawanna, from its source to its mouth, in 1843. Tall and graceful pines stood upon the banks to the water's edge, under whose shadows, the deer, the rabbit and the pheasant made their home, without fear or danger. At the mouth of the Run I have stood and caught trout, weighing a pound or more. In 1843, I used to visit this point on Sunday, with a charming lady, now in California, in search of wintergreen berries, of which there were millions here. It was famous as a deer way. Driven from Cobb or Moosic mountain, by dogs, the slope was so easy and the banks of the river so low that a deer could easily escape the hounds, but they sometimes fell by the Blakely hunters, the Dolphs, the Ferrises, Callenders and Hulls, as they attempted to cross the Lackawanna. / In the winter of 1844-45 the axe first swung in the forest here. A bridge was thrown across the stream and a smith shop erected by the D. & H. Co. for D. G. Sligh, now of Kingston, to sharpen the tools of the miners, then beginning work here under the direction of Messrs. Archbald and Clarkson. The shop stood nearly opposite the store of Jones & Simpson. The rare sight of seeing labor rewarded

with cash payments each and every month, instead of dubious and prolonged promises to pay, was now seen in the township of Blakely for the first time since its settlement. The fact stands out in honorable prominence that monthly cash payments for labor in the Lackawanna Valley were instituted by the D. & H. Canal Co. [Emphasis added by SRP] Prosperity brings its friendships, and while the broad township of Providence, then embracing Scranton, Hyde Park, Dunmore, Providence, Green Ridge, Petersburg and Dickson saw the prosperous development of coal at Archbald, they still opposed it, while the occupants of Baconville, now Jermyn, and upper Blakely, more liberal because of the substantial benefits accruing to themselves, favored the expansion of the company and the fullest exercise of their franchise.”

In the description given above, Hollister points out the very important fact that "monthly cash payments for labor in the Lackawanna Valley were instituted by the D. & H. Canal Co." The economic consequences of that fact are immense. The unprecedented economic prosperity in the anthracite coal region of Pennsylvania during the nineteenth century is a consequence of that important initiative on the part of the Delaware and Hudson Canal Company. That fact was understood and recognized by P. S. Joslin in 1899 when he said:

"The D&H company paid cash to its employes, consequently Carbondale was a cash centre, where every thing for the supply of the wants of its people, brought ready money. The Lackawanna and Wyoming valleys found a ready market for their flour, while Susquehanna, and Broome counties, and even as far away as Owego, found a market for their pork, butter, cheese and grain." ("CARBONDALE IN ITS INFANCY. / A Series of Articles on the Early Days of the Anthracite City by One of Its Pioneers. [Contributed by P. S. Joslin.], *Carbondale Leader*, August 5, 1899, p.6)

Side note on money and D&H Banking Privileges: 1823-1843:

In Hollister's unpublished 1880 typescript we read: "Banking privileges which were originally granted to the company by special Act of Legislature of New York in 1823, expired Nov. 19, 1843. It was not found expedient or profitable to make any other use of them than to circulate the Company's own Bank paper in its Canal and coal payments. The Board deemed it advisable to ask for a renewal of the privileges, but concluded to give exclusive attention to mining, transporting and trafficking in coal. . ."

More on the early days of Archbald:

In *Passenger and Freight Stations Delaware and Hudson* ("Inspection of Lines, June 7-10, 1928), page 30, we read: "Archbald was settled by Welsh immigrants in 1831. It was then known as 'White Oak Run.' / About 1845 the name was changed to Archbald in honor of James Archbald, Chief Engineer of the Delaware and Hudson Canal Company. Population 9,100."

Pic-Nic in Archbald when the White Oak Run branch of the D&H was opened:

In *The Carbondale Democrat* of September 4, 1846 (p. 2) we read: "For the *Carbondale Democrat*. / **The Pic Nic.** / The second day of September, is one likely to be long remembered in

Carbondale as one which brought together a majority of the beauty and worth of the district. According to previous arrangement, the ladies and gentleman of Carbondale together with others from the adjoining country, and a party from Philadelphia assembled in the morning for the purpose of joining in a pic nic excursion and dedicatory ride on the White Oak Run branch of the rail road. / The company assembled, consisted of about sixty individuals, besides the Carbondale brass band, all of whom were comfortably arranged in the cars provided by Mr. S. H. Pierson, the active manager of the affair, and soon started down the light track. / After about an hour's ride, and passing many interesting objects and places, the cars stopped at the head of the planes in Blakely, and the party commenced their walk passing by the growing village of Archbald, and the newly opened mines, to the falls on the White Oak Run. / Here in a shady amphitheatre of rocks, by the side of a most beautiful basin of water into which the chrystal stream from the cascade was continually pouring with a pleasing sound, a rich repast was prepared, of which all partook with appetites alone to be felt by those who have rambled in this interesting locality. The pleasures of the scene were increased by the beautiful music of the band who deserved, and received the unanimous praise and thanks of the company. After the collation some of the party remained to enjoy the pleasure of conversation or the music of the band, while others wandered off to explore the shadowy recesses of the Run, than which a more romantic stream never was seen in this section of the country, and which we may one of these days notice. / Amid these varied scenes of enjoyment the hours fled rapidly away, and the lengthening shadows gave warning to return;--the bugle sounded a recall and collecting our scattered parties, we started on our march toward home, which we reached after a fine ride of six miles down the loaded track. All separated greatly pleased with the arrangements and general course of events during the day. Seldom has unanimity of feeling been displayed here, but we hope that this may be but the commencement of a new era in the annals of Carbondale society. We conclude by adding one of the first volunteer toasts, by Mr. P., the sentiment of which is heartily concurred in by all the gentlemen. / *'The ladies of this party, and the falls of White Oak Run, The eye that could behold either without admiration, is unworthy to open in the 19th century.'* “ (*The Democrat*, September 4, 1846, p. 2)

The following description of Archbald was published in the *Carbondale Democrat* of March 30, 1849, p. 2:

"ARCHBALD. / The neat and thriving village, deriving its name from the Agent who has so long and successfully presided over the Coal operations in this portion of our valley, is located near the intersection of the *White Oak Run* with the *Lackawanna*, 7 miles down the valley from this place [Carbondale]. The mining of Coal to any considerable extent there, commenced only about two years since, still by the following statistics handed us by a friend, it will be seen that even in so short a space of time the village has attained to considerable business and importance. / 'It is now a little more than 2 years since the D. & H. Canal Co. commenced their operations at this place, and it is not generally known even in the immediate vicinity, that the population consists of any more than a few miners and others directly employed by the Company. The following statistics may therefore be a matter of interest to many, particularly the farming

community who will see in this flourishing village, a new and rapidly increasing market for the surplus productions of their farms. According to the report of a gentleman appointed to take the census of the village, it appears that the total number of inhabitants in Feb. last, amounted to 1172. Dwellings erected since Sept. 1848, 25, many of which are neat and substantial buildings. Now in the course of erection 10. Number under contract and in contemplation which will probably be finished during the coming summer, may be put down at 30.—Stores for the sale of dry goods and groceries, now doing business, 4; Clothing do. 1; Groceries and liquors 3; Drugs and medicines 1; Hotels 2; Shoe shops, 2; Blacksmith do. 3; Tin, 1; Tailors, 2; Carriage maker and painting 1; Dry goods stores ready to commence business, 2. / This much has been accomplished within the short space of two years and as no limits can be assigned, to the deposits of Coal, so we may reasonably expect an increase of population corresponding with the increasing demand of this great staple of our valley. / One fact in regard to the growth of our Lackawanna Villages should be generally understood, viz; that the growth of the Village of Archbald, and the several other Villages of our Valley, is in each instance a gain of population to our section, and not a transfer or shifting of it from one point to another.—During these same two years, the population of Carbondale, Providence, Hyde Park, Harrison and Dunmore, has also increased, while the surrounding farming Districts have also augmented in population and wealth. The increase is from abroad, and this will continue to be the case as the resources of our valley are gradually developed. New locations of business will be continually arising and acquire importance without detracting anything from the business of those of an earlier date. The business of our valley will increase by a ratio, that divided between many different points as it may and will be will leave between the sister towns little room for envy or jealousy, but ample to sustain and render prosperous the business of each." (*Carbondale Democrat*, March 30, 1849, p. 2)

Vandalism causes accident near Archbald in 1850:

"Rail Road Accident. / Another melancholy accident occurred upon the Rail Road near this village this week. On Tuesday Morning as the Train of empty cars were going towards Archbald, when about a mile below Powderly's mines, they were thrown off the track, and PETER HALLOCK, one of the hands upon the train was so injured that he died about noon of the same day. He was a sober and industrious man and leaves a wife and three children who were entirely dependent upon him for support. The circumstances of this case, in every point of view peculiarly afflicting, are rendered still more so by the fact that the accident is believed to have been caused by the placing of wedges upon the track by some reckless person for purposes of mischief. If it be so it exhibits a character of almost fiendish cruelty and depravity." (*The Lackawanna Citizen, and Carbondale Democrat*, Friday, May 3, 1850, p. 2)

With the completion of the line to Archbald, that community became an important freight shipping location in the Lackawanna Valley. P. A. Philbin says:

"Archbald the Terminus. / Archbald was the southern terminus of the Gravity Railroad from 1846 to 1859. All the freight received for and from the residents of the Lackawanna valley as far south as Pittston was received at the depot, or storehouse, as it was commonly called, which stood about one hundred feet south of the Hill street crossing of the Delaware & Hudson railway.

The first station-agent at this depot was John Spangenburg and his assistant was James Corcoran. Because of the large freight business even in that far off time, the depot, which was 60 by 100 feet in size, was frequently packed with goods. This was the case especially in the spring and fall when the merchants of the valley went to New York to do their buying. It took two or three weeks for a shipment from New York to reach the valley. The freight was loaded on canal boats there and towed up the Hudson to Rondout, the eastern terminus of the canal, and thence to Honesdale."

Hard times for coal operators:

1858: "The Delaware and Hudson Canal Company closed their mining and running coal for the season, in this place [Carbondale] and Archbald on Wednesday last. They have also discharged a large portion of their hands in the shops, so that from now until they resume operations in the spring, an unusual large number of men will be out of employment. When the Company commence running coal again, it will be on their new railroad, and they will increase the quantity taken away, unless the demand for coal should continue so limited as to make it no object. The mild winter that we have had, while saving money to the consumers of coal, has been a hard one on the holders and retailers of the article. This, in conjunction with the extinguishment of so many factory fires, the lying by of so many steamships, has had a tendency to make coal rather of a drug in the market. Coal operators may well complain of 'hard times!'" (*Carbondale Advance*, February 13, 1858, p. 2)

Four serious accidents in Archbald in eight days:

"Accidents at Archbald. The village of Archbald has been the scene of another series of accidents. No less than four of a serious nature have occurred within eight days. / On July 15th, a child, aged three years, of Alfred Sears, an engineer of No. A, was taken by the pump belt of the engine and carried partially under the wheel. He would have been crushed the next moment but for the presence of mind displayed by the father in stopping the engine. The child was standing by his mother's side when caught, and before she had time to turn round he was beyond her reach. His abdomen was torn open from the upper part of one hip to the other and down to the intestines, which, fortunately, were not hurt; his throat was severely cut, the vessels and nerves laid bare. He was attended to immediately, and is now nearly well. / July 16th, Henry Seybolt received two wounds in the abdomen, both penetrating to the intestines. He was mining coal, and having applied the fire to a blast, it went off before he had time to escape [sic]. / July 18th, Timothy White, aged 14, was found, with a rope around his neck, hanging from a schute at Eaton & Co.'s mines. It is supposed he fell from the schute, and in trying to catch the rope, it got round his neck. There was a dislocation of the first and second bones of the neck. He was in convulsions for three hours, which ceased by appropriate treatment.—He also recovered to partial consciousness, and spoke several times. He died on the third night after the accident, from inflammation of the brain. / July 23th, Patrick Walsh, in attempting to get on a loaded train, was thrown down, the wheel passed over the ankle of the left foot, crushing it in a dreadful manner. The foot was not amputated, as an effort is being made to preserve it. / The above cases are under charge of Dr. John Foote. (*Carbondale Advance*, July 30, 1859, p. 2)

Mining is to commence at Easton & Co.'s works at Archbald:

"It is reported that mining is to commence at Easton & Co.'s works at Archbald on Monday next. We congratulate all concerned—and who is not in this region?—upon the termination of this long 'strike.' Spring and summer have passed, and the season's business commences Sept. 17th." (*Carbondale Advance*, September 15, 1860, p. 3)

Bullet fired through a window of a passenger coach in Archbald:

"A desperado fired a bullet through a window of one of the passenger coaches as the last train left Archbald for this city on Monday evening. Superintendent Manville occupied a seat very near the window through which the bullet was fired, while no one occupied the seat directly opposite this window. It is a pity a bullet could not be put through the head of the hell-hound who fired the pistol. It is a wonder that somebody was not killed." (*Carbondale Leader*, May 6, 1876, p. 3)

Three articles about the death of Mrs. Ann Smith from the August 26, 1881 issue of the Carbondale Leader, p. 4:

(1) "Our Archbald correspondent gives some interesting particulars of the accident which happened to Mrs. Ann Smith, the *Republican's* account of which we also copy. The deceased lady was buried in this city on Thursday in Maplewood cemetery. She leaves three children, two boys aged 15 and 11, living at Winton, and a daughter aged 13, living in this city with the family of J. W. Aitken."

(2) "Mrs. Ann Smith, a widow lady from Winton, was run over on the light track at 'Buck Horn' Wednesday last by a portion of the train of which Chris. Schultz is conductor. It seems she was walking on the track, and just escaped being run over by the section of the train ahead of Schultz. Jenkins, the runner of this trip, shook his fist at her, at which she smiled, but stepped on the track again and walked into the trip run by Schultz, just below where the light track runs under plane 25. She was removed to her home where she survived but a few hours. Mrs. Smith is said to have been very deaf."

(3) "KILLED BY THE CARS. / Yesterday morning an old lady by the name of Mrs. Ann Smith, living at Winton, started from home to go to her sister's house at place known as the Ridge, where her young daughter was visiting. On her way she had to cross the track of the Delaware and Hudson's gravity railroad. In doing this she was struck by a passing coal train and knocked beneath the wheels, the cars passing over her legs, mangling them in so serious a manner that death ensued after a few hours. Physicians were called, but it was at once discovered that nothing could be done to save her life. The accident occurred at the point above Winton where the 'light track' and the 'loaded track' cross, the one above the other, and it is supposed that the noise of the passing train on the upper road, drowned the sound of the train on the track she was crossing.—*Rep.* Aug. 24."

Heavy snow in Archbald:

"DOWN THE VALLEY - Archbald. Now is the winter we have been looking for so long in

vain upon us, and the runners on the gravity got the full benefit of it Tuesday afternoon and night. Some of them got stuck at the 'middle branch' and wallowed home through two feet snow about midnight. The cars were started about noon Wednesday." (*Carbondale Leader*, February 3, 1882, p. 4)

Archbald Pothole:

During the glacial period, ice at Archbald was said to have been 2,000 feet thick. The celebrated Archbald pothole was formed when that ice melted. This pothole was discovered in 1884 by Patrick Mahon, a miner employed by Jones & Simpson Co.

New vein of Coal discovered in Archbald:

"NEW VEIN OF COAL Will Be Mined by the Forest Mining Company. / Miners in the vicinity of Archbald will be pleased to hear that the Forest Mining company is about to begin mining from a six feet vein of coal, discovered but a few days ago. In view of the fact that the Delaware and Hudson mines are not working on account of the burning of the White Oak breaker, this is particularly good news. / The opening will be made on the Hackley tract, a little beyond the culm pile on the west side of town. Several attempts were made to strike the vein but this was not accomplished until last week. The vein is a particularly good one as it consists of six feet of clear coal, perhaps the best to be found in the borough. Its extent is as yet not definitely known. The vein is supposed to exist in two hundred acres of the tract. / When the drift from which the coal will be taken is in operation the coal will be taken to Raymond Breaker at the Ridge and then prepared for market. The working of the drift will give employment to many men and boys." (*Carbondale Leader*, July 31, 1899, p. 2)

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Archbald and the Erie Rails:

P. A. Philbin: "It is a fact not generally known, that the T rails used in the building of the main line of the Erie railroad were shipped to their destination from Scranton's mills in Slocum Hollow by way of Archbald. These rails were taken to Archbald on long wagons, drawn by four-horse or four-mule teams and loaded on trucks at the foot of No. 1 plane [in Archbald] and sent over the mountains to Honesdale and the canal. / **The Erie Rails.** / This shipment of rails, by the way, was the salvation of the Erie railroad. Although the T rail was an American invention there were so few made here that England was the chief source of supply and in the early 40's they were sold for \$80 a ton [emphasis added]. The state of New York had assisted in building the Erie railroad and the Erie company could not pay the interest on the \$3,000,000 which it owed the State. The railroad was, therefore, advertised for sale under foreclosure by the State Comptroller but the sale was postponed by the legislature and the company was given until April 14, 1851 to complete the railway to Dunkirk, N. Y. At this juncture the Scrantons interested William E. Dodge in their mills and on their assurance that T rails could be manufactured for little more than half the price of the English product, Dodge advanced the money for the equipment of the Scranton mills. The twelve thousand tons he contracted for were sold for \$46 a ton and were ready for delivery in 1847. The promptness of the Scrantons in delivering these rails enabled the Erie company to complete the railroad within the required time."

Erie rails shipped over D&H Gravity from Archbald; interesting irony: D&H “saves” Erie:

Article titled “Erie’s Early Troubles,” which was published in the *Carbondale Leader*, September 21, 1878, p. 4 (reprinted from the *New York Times*). **“Erie’s Early Troubles. / HONESDALE, August 28.**—The work of narrowing the gauge of the Erie Railway, which is progressing rapidly along the line, recalls one of the most interesting and important incidents in the history of the pioneer of American trunk lines—an incident by which the New York and Erie Railroad Company was enabled to save the forfeiture of its franchises to the state [NY], and by which another struggling corporation was enabled to raise itself from insignificance and probable bankruptcy to be one of the most wealthy and powerful of its kind in the country. / After the great financial revulsion of 1836-7 had compelled the suspension of early operations on the railroad, the state came to the aid of the company, and in 1838 loaned it its credit to the amount of \$3,000,000. This large amount of money was used up, and only 61 miles of the road in operation in 1845—from Piermont, on the Hudson, to Otisville, the summit of the Shawangunk mountains, in Orange County. Not a small share of the company’s means had been spent in carrying out the ridiculous idea of its engineers that rails must be laid on piles from Owego to Hornellsville. For a distance of 90 miles two rows of heavy posts were sunk in the earth. Each one of these posts stood for many a year afterward as a monument to the memory of millions of wasted riches, for they were never used, and the last one disappeared from the side of the present route only a few years ago. / In 1845 the state came again to the aid of the railroad enterprise. By act of the assembly of that year the company was released from the claim of the state against it, and liberal provisions were made as to subscriptions to new stock. This legislation was accompanied with the proviso, however, that unless rails were laid and the road was in working order between the Hudson and Binghamton by January first, 1849, the company should forfeit all its rights, franchises, and titles to the state. Thus given a new lease of life and another replenished Treasury, the directors of the company again ordered the work to proceed. The rails with which the road was ironed between Piermont and Otisville was of English iron, which cost \$80 a ton. The straitened circumstances of the company, and the time to which it was limited, required the obtaining of iron at a cheaper rate and in a more convenient market. / At that time [1845], the manufacture of railroad iron was an entirely new industry in this country. Up to 1845, no T-rail had been made here, the strap-rail being used. The New York and Erie imported the first T-rail on this side of the ocean. In 1843, Colonel George W. Scranton and Seldon T. Scranton of Oxford, N.J., established a rolling mill and rail factory in the village of Harrison, now the city of Scranton, Pa. It was known as the Lackawanna Iron Works. In 1846 the Scrantons, knowing that the New York and Erie Railroad Company had paid \$80 a ton for the rails imported from England, and that it was necessary for iron to be obtained by the company at a lower price made a contract with the railroad company to furnish it with 10,000 tons at a rate much less than that of the English iron. At the time of making this contract, the iron company had no machinery capable of turning out the rails, and furnaces and all had to be provided. The iron was to be delivered to the New York and Erie Railroad’s agents at the mouth of the Lackawaxen river, in Pike county, Pa., during 1847-8. A number of prominent capitalist interested in the success of the railroad loaned the Scrantons \$100,000, with no security but their word. The machinery for the iron mills was drawn 60 miles by teams, and was ready for operations in a few months. As fast as the iron was ready it was drawn by teams nine miles to Archbald, Pa., then the southern

terminus of the gravity road of the Delaware & Hudson Canal Company. On this road it was carried over the Moosic Mountains to Honesdale the head of the canal, where it was loaded on boats, which delivered it to the railroad company at Lackawaxen. From there it was carried on the canal to Port Jervis. / When 1,500 tons has been thus delivered the rails were laid from Otisville to Port Jervis. Then the difficulties of running the road into Pennsylvania arose. The road was originally intended to cross the Delaware at the village of Matamoras, nearly opposite Port Jervis, but the route was impracticable, and it was decided to change the crossing point to Sawmill Rift, three miles further up the river. Injunctions were served on the company forbidding this change of route, until it had agreed to construct a bridge across the river at Matamoras. The delay attending these proceedings threatened to be fatal to the completion of the road to Binghamton within the stipulated time. [Unless rails were laid and the Erie had the road in working order between the Hudson and Binghamton by January 1, 1849, the Erie would forfeit all its rights, franchises, and titles to the state.] Accordingly a change was made in the terms of the contract with the iron company. Instead of having the balance of the iron delivered at Lackawaxen, the railroad company had it distributed at different points along the Delaware Division. The iron was hauled on wagons over the heavy mountain roads of Northern Pennsylvania to Narrowsburg, Cocheton, Equinunk, Stockport, Deposit, and Lanesboro'. Over 400 mules and horses were employed in the carting. From these points the rails were simultaneously laid, resulting in the completion of the track, according to agreement with the state, five days before the date fixed upon. / The celebration of the event in Binghamton on the 28th of December, 1848, was one of the greatest demonstrations ever witnessed in this country. The contract was a profitable one to the new iron company, notwithstanding the expense and labor connected with its fulfillment, and it had laid the foundation for the present great city of Scranton, and resulted in taking into the Lackawanna Valley a capital of \$150,000.000. The present gigantic corporation, the Lackawanna Coal and Iron Company, is the direct outcome of that early venture of the men whose great business enterprise saved the New York and Erie Railroad from certain bankruptcy.—*N.Y. Times*.

Railroad Iron from England:

The arrival in New York from England of 5,020 tons of railroad iron "on Tuesday" is noted in the *Carbondale Transcript & Lackawanna Journal*, October 7, 1853, p. 3: "RAILROAD IRON.—On Tuesday no less than eight vessels arrived at New York from England with cargoes of Railroad Iron, viz: Ship Medallion, 893 tons; ship Amelia, 845 tons; ship Moro Castle, 782 tons; ship Champlain 745 tons; barque Florence, 485 tons; barque Gleanor, 350 tons; barque Rainbow, 500 tons; and the barque Austin, 420 tons—making a total for the eight vessels of 5,020 tons."

4529

“... the new Town of Jessup”

“**Jessup.** / The other day on a trip through the valley, we diverged from the Plank Road, a half mile to the left of the Lackawanna, to take a glance at the new Town of Jessup,—two miles below Archbald,—the present intended terminus of the Susquehanna and Lackawanna Railroad.

Crossing the river, after a short walk, upon a gentle elevation we found one of the most beautiful locations for a town that one can well imagine.—The ridge commands a complete view of the valley to the west and south-west,—with every inducement to those having capital [sic] to invest, either in the coal operation of the valley, or as a desirable and healthful retreat to the man of leisure. Although in its infancy, Jessup presents to the eye many interesting and stirring scenes. The company, in anticipation of the speedy completion of its Railroad, connecting at Greenville with the Del. Lack. & Western to N. Y., is preparing with all diligence to bring its coal to the surface, and the ‘black diamond’ of Pennsylvania,—of more intrinsic wealth to her people, than the auriferous deposits of California are to the world,—will soon be placed in huge heaps ready for shipment. At present but two ‘shafts’ are being sunk. The first, or No. 1, as we shall call it, has penetrated to the depth of 130 ft. having passed several small and not workable veins at the time of which we speak, with every indication of a close proximity to the large vein pervading the upper Anthracite coal region. The second, or No. 2 shaft, had penetrated some 90 ft. passing through the same veins of unworkable coal. The mining operations of the company are conducted by Mr. James Clarkson, our fellow townsman, as chief mining engineer, with Mr. Nichol as mechanical superintendent. We saw Mr. Nichol but a moment, just as he was in the act of being handed down by windlass to these depths below. He is one of those hardy, thorough going men, possessing that strong nerve and indomitable will which never flinches and which can only overcome obstacles. His face is an index to his character. / The company have already erected a large Machine Shop and Foundry,—with the machinery all in place, ready to commence operations at the word. These buildings, and the putting up of the machinery, have been under the superintendence of Messrs. Herrick and Benson, the very best practical men that could be procured. In addition, twenty dwellings for miners are, some of them quite, and nearly all, completed. / We noticed also two large stores, one finished and occupied by our old Montrose friends B. R. Lyon and Charles Perkins, the other build by an enterprising gentleman, Mr. Seabolt, of Otisville, N. Y. There are also some dozen or fifteen private dwellings, on eligible sites, several of them being owned and occupied by former residents of our own goodly city. The streets are laid out with great regularity, 80 ft. in width,—the Depot grounds selected, and little time is only required to make Jessup among the most flourishing places in the Lackawanna Valley. / To the energy, strength of character and foresight of Judge Jessup, the President of the Susquehanna and Lackawanna Railroad Company, as well as to the business tact and industry of Mr. Michael Meylert, Treasurer, are the people mainly indebted for the present prosperous complexion of things,—so far as the new town of Jessup is concerned. Within a comparatively short space of time, as soon as things are fairly under way at Jessup, the continuation of the Railroad to Meredith,—scarcely a mile below us, will be put under contract, and then,—we must depend upon the enterprise of our people for the introduction of the ‘Iron Horse’ upon our public square. Oh, how we should like to see him careening, snorting and bounding along, waking the echoes among the ravines, and listen to the re-echoes away on the mountain tops. / Before quitting Jessup, it being near the hour, we were invited to dinner by Mr. Dexter Conklin, a former citizen with us. Mr. C. erected the first new building in Jessup. We may as well mention in conclusion that the site of the new town is upon what has been known as the Seymour place. Col. Seymour, now deceased, an efficient engineer and draftsman, having formerly resided there many years.” (*Carbondale Transcript and Lackawanna Journal*, July 13, 1855, p. 2)

The Jessup family came to Carbondale in 1828:

In an article titled “**EARLY LOCAL HISTORY / Called Up by the Death of Mrs. Susan E. Waterbury**” that was published in the October 13, 1892 issue, p. 4, of the *Carbondale Leader*, it is reported that Mrs. Waterbury died on June 12, 1892, at the residence of her son Charles in New York City. In that article, we read that “Mrs. Waterbury was the daughter of Deacon Sylvanus Jessup. She came to Carbondale with her father’s family in 1828. There were then but few families in the place and a less number of residences. The Jessup family took up their quarters in the log house west of the river, near the old Weston mill, which had just been vacated by the family of Salmon Lathrop who had occupied it for the year previous. / Some years after when the Delaware & Hudson Canal company wanted the old house for an office, the Jessup family moved onto South Main Street. In the meantime the deceased was married to John H. Waterbury, a merchant tailor, whose place of business was on Main Street about where Tralles’ building is situated. / The wedding occurred in 1829. . .”

Coal discovered at Jessup:

“**Coal at Jessup.**—We learn that coal has been struck at Jessup, at a depth of 130 feet. The vein of coal is nine feet in thickness and of a superior quality. It was overlaid by 56 feet of solid rock. The event has inspired new vigor into the parties concerned, the result of which will be that Jessup will ‘go ahead.’ ” (*Carbondale Transcript and Lackawanna Journal*, August 3, 1855, p. 2)

4530

In Praise of James Archbald:

It would be impossible to overstate the importance of James Archbald in the history of the Delaware and Hudson Canal Company. The significant role that he played in the early history of the D&H and in Carbondale and the Lackawanna Valley and beyond was recognized by his contemporaries.

Public meeting held to bid farewell to James Archbald and James Clarkson:

1853: "**PUBLIC MEETING.** / The undersigned, most respectfully ask their fellow-citizens to unite with them, on TUESDAY Evening, the 15th inst., at the City Hall, in a public demonstration, for the purpose of giving expression to the sentiments of esteem which are so universally entertained in our community for our old friends and neighbors JAMES ARCHBALD and JAMES CLARKSON, Esquires, and likewise, the feeling of deep regret pervading all classes among us, at their resignation of their respective positions as Agents of the Delaware and Hudson Canal Company, and contemplated departure from our midst. / November 11th, 1853. / JOHN MERRILL POOR, SOLOMON ARNOLD, HENRY EVANS, THOMAS SWEET, SAMUEL MILLS, NATHAN JACKSON, THOMAS GILLESPIE, J. G. THOMPSON, JOHN S. LAW, WILLIAM N. ARNOLD, GEORGE K. JONES, PATRICK MOFFIT, JR., THOMAS VOYLE, ANTHONY MILES, JOHN HOWELL, THOMAS GLENNAN, PATRICK GLENNAN, ESDRAS HOWELL, ANTHONY BATTLE, WILLIAM MCHALE, R. MORRISON, THOMAS CONNOLLY, PATRICK DELANEY, JOHN NEALON, MARTIN

CANAVAN, B. K. BRONSON, M. B. CORBY, JOHN GILROY, JOHN HEWITSON, ANDREW KERINS, R. W. EATON, GEORGE H. WENTZ, DOMINICK BOLAND, HENRY JOHNSON, PETER BYRNE, JOSEPH GILLESPIE, R. E. RUTHVEN, J. H. ESTABROOK, P. C. GRITMAN, PATRICK LOFTUS, ANDREW SMPSON, CHARLES LAW, P. S. JOSLIN, Z. K. WALDRON, J. B. STARK, MERRIT WILSON, M. B. WHITE, HUGH O'NEILL, ALFRED DART, WILLIAM ROOT, WILLIAM PECK, E. A. BENEDICT, D. K. MORSS, EDWIN WATT, JOHN C. DAVIS, THOMAS A. DAVIS, ALMON CROCKER, BENJAMIN MORSS, JR., LATON PETERS, F. C. WARDELL, R. E. MARVINE, J. CHAMBERS, C. MORRIS, G. L. DICKSON, GEORGE PERKINS, CHARLES BERRY, LEWIS PUGHE, EVAN HARRIES, ROBERT EVANS, HOMER GRENNEILL, A. H. GRENNEILL, JOHN FORBUS, AMZI WILSON, SAMUEL R. RAYNOR, JAMES STOTT, MOSES CALDWELL, RICHARD KEATING, PATRICK MOFFIT, SR., JOHN THOMAS, NEAL FALLON, P. J. DUBOIS, ARCHIBALD BROWNING, RICE LEWIS, M. D., JAMES HAMILTON, ROBERT DICKSON ALEXANDER RUTHVEN, WM. P. E. MORSS, WILLIAM BROWN, JOHN H. WATERBURY, G. R. CROCKER, EDWARD JONES, F. P. GROW, JOHN DORRANCE, CYRUS ABBOTT, DANIEL TAYLOR, IRA TRAPHAGAN, S. S. BENEDICT, RAYMOND W. GRAVES, HORATIO S. PIERCE, HENRY STRONG, D. N. LATHROPE, GEORGE FOSTER, A. F. MACK, JOHN GORMAN, JOHN M'KILLIP, GEORGE M. REYNOLDS, GEORGE W. GRISWOLD / In response to the above call, the citizens of Carbondale assembled in vast numbers at the City Hall, on Tuesday Evening, the 15th inst., to express the sense of this community upon the resignations of James Archbald and James Clarkson, Esqrs., as Superintendents of the Delaware and Hudson Canal Company, and to pay tribute of respect to their exalted virtues and moral worth, as well as to manifest the universal regret at the prospect of being deprived of them as neighbors and citizens. / On motion of Dr. Nathan Jackson, / JOHN MERRILL POOR, ESQ., / was appointed President, who, upon assuming the Chair, briefly stated the objects of the meeting; when, on motion, of G. M. Reynolds, the following named gentlemen were chosen Vice Presidents: D. K. Bronson, Patrick Moffat, Sr., Anthony Grady, Homer Grinnell, H. S. Pierce, William Root, Lewis Pughe, Geo K. Jones, F. P. Grow, R. E. Marvine, Thomas Sweet, Amzi Wilson, James Stott, Joseph Gillespie, Cyrus Abbott, Bernard Campman and John H. Waterbury. / George M. Reynolds Secretary./ The meeting having been thus organized P. C. Gritman, Esq., in a speech of some length stated the objects for which it was convened, and moved the appointment, by the Chair, of a Committee to draft and report Resolutions appropriate to the occasion; whereupon the following gentlemen were appointed said Committee: / P. C. Gritman, John S. Law, P. S. Joslin, Nathan Jackson, Horatio S. Pierce, Henry Howell, and Patrick Farrell. . . . [letter from Alfred Dart here inserted as part of the proceedings; also inserted and reported as part of the proceedings were the resolutions adopted and reported by the Committee on Resolutions through its Chairman, P. C. Gritman, Esq.] (*Carbondale Transcript and Lackawanna Journal*, November 18, 1853, p. 2)

Description of the farwell to James Archbald and James Clarkson

"The Meeting / At the City Hall on Wednesday evening, was an event not soon to be forgotten. There seemed to be a spontaneous pouring forth of the masses—all the different avocations among our people being represented. The utmost harmony and good order prevailed in its deliberations, at the same time the resolutions and speeches called forth the most unbounded

applause. The large Hall was filled to overflowing, so dense was the crowd that many of the seats gave way, and large numbers were unable to gain admittance. To realize the scene, the reader should have been present. The business man, the mechanic, the miner, the labor and the fireman, all were out in numbers—and even the little mine boys, with their lamps burning, marched into the Hall. / The objects for which this gathering was held are fully set forth in the published proceedings; hence we shall not allude to them, further than to state the universal regret felt in this community at the prospect of being deprived of two of its old stand-by's in all that has tended to promote its prosperity. / After the adjournment of the meeting, a Torch Light Procession, headed by the Fire Department and the Carbondale Brass Band, marched to the mansions of Messrs. Archbald and Clarkson, manifesting thereby a trifling tribute to the kind remembrance of these gentlemen. Mr. Archbald was absent from home, but Mr. Clarkson appeared upon his steps, and in a few brief remarks, gave utterance to the sentiments of his bosom,—though not a man of many words, what he did say was received by the Fire Department (of which he was the Chief Engineer) with deafening shouts. The procession then passed through several streets to the Public Square, where, in front of the City Hall, three cheers that made the welkin ring, were given for James Archibald, three more for James Clarkson, and yet three more for the Delaware and Hudson Canal Company. / The assemblage then dispersed, and although the streets were thronged with thousands in the early part of the evening, before ten o'clock all was quiet—the multitude having melted away." (*Carbondale Transcript and Lackawanna Journal*, November 18, 1853, p. 2)

To conclude this section on James Archbald, we present (1) an appreciation of James Archbald that was written in September 1866 by S. S. Benedict, Editor of the *Carbondale Advance*, and (2) an article about James Archbald that was written by P. S. Joslin and published in the September 9, 1899 issue, p. 2, of the *Carbondale Leader*.

S. S. Benedict on James Archbald:

“James Archbald. / We have been amazed at the proceedings of the County Convention held at Wilkes-Barre on Tuesday last. It did many unexpected things, but we have been most astonished at the nomination of James Archbald, of Scranton, for Congress! JAMES ARCHBALD—we have known him well for thirty years—and during the whole time his name has been a synonym for integrity and ability! It is passing strange for a County Convention to do anything so sensible as the nomination of such a man for Congress. The people have come to expect that Conventions should be a cabal of politicians fighting for spoils. But the Convention of Tuesday is surely a noteworthy exception. The delegates deserve well of their constituents and the people of this Congressional District, for showing a disposition to be governed by higher and nobler principles of action. / We say higher and nobler, upon the ground that country is of more consequence than party, and the interests of the whole people are of more value than the interests of any mere portion. / A nomination like that of Mr. Archbald is outside of and above the political arena. He is of the people, and not of any political circle, and the nomination appeals not to partisan interests, but to the popular heart. He is, of all men among us, the most fitting representative of the material and industrial interests, the public enterprises, and the popular wants of this Congressional District. / Mr. Archbald was one of the early residents of our town, and over thirty

years ago was placed in charge of the then new Coal and Railroad business which had been recently started by the Del. & Hud. Canal Co. There were then few precedents to guide a Superintendent, but his main reliance was necessarily his own judgment and sagacity. Richly endowed with these, his administration was from the first a success, and success of the highest degree. The Company prospered beyond all of its competitors. Its stock was the most valuable and most sought for of any offered in the market. Upon the other hand, and it is a point of still more importance, labor was the best remunerated, and most promptly and regularly paid of any place then known in America. [emphasis added] This last feature most fully illustrates the nature and character of the man. His interest and sympathy in the men in his employment seems paternal. It appears in all his actions and all his dealings with them. He enjoys their full confidence because they know he is their friend, and they cheerfully reciprocate the kindly feelings which he feels and manifests toward them. This state of things characterized his whole administration here under our observation, for a period of more than twenty years. We have never known or heard of any man employed by him that did not feel that he was treated fairly and justly. / Upon the incorporation of our city he was by the united voice of our people called to the office of Mayor, and was three times re-elected, receiving the votes of all parties. / His marked success in conducting the business of the Del. & Hud. Canal Co. placing it in the foreground among its competitors attracted the attention of rival companies. His services were urgently sought for, and as the business of the Del. & Hud. seemed then to have assumed somewhat of a beaten track, others, projecting newer, more difficult and more comprehensive enterprises claimed that he could be spared from his position here, and ought to leave it and take one in which his very remarkable talent and sagacity would find wider scope and enable him to be still more useful. These solicitations at length prevailed, and Mr. Archbald removed to Scranton to succeed Col. Scranton as General Agent in conducting the colossal business of the Del. & Lack. & Western Railroad Co. There, as with us, his administration has been crowned with complete success, and under his auspices that Company has become one of the strongest in America, and as is the case everywhere under his management, labor is liberally paid, those employed are industrious and faithful, thriving and prosperous. / We cannot farther sketch his distinguishing traits to-day, only to say that a very prominent one is modesty. He is averse to all pretension and display, and his calm equanimity seems never ruffled with pride or resentment. / We believe no man deserves so well of the people of this Congressional District, and none can serve us better in Congress. We shall support and vote for him, not as a Republican, not as a Democrat, not as a politician in any partisan sense, but as James Archbald—with merit above and beyond any political party.” (*Carbondale Advance*, Saturday morning, September 8, 1866, p. 2)

P. S. Joslin on James Archbald:

"For the material part of the biographical sketch of James Archbald, we are indebted to the kindness of his son, James Archbald, of Scranton, and to a general sketch written by Augustus Frothingham at the time of his death, and published in the *Scranton Republican* of Sept. 1, 1870. / James Archbald was born on the Little Cumbræ Island, in Buteshire, Scotland, March 3, 1793. He came to this country, with his father in April, 1807. They settled in the Mohawk valley at the mouth of Schoharie creek. He was inured to labor on his father's farm, and at a very young age

entrusted with the disposition of their farm produce, some of which was taken to Albany, a distance of about forty miles. / When the Erie canal was built, it ran through his father's farm at Auriesville, Montgomery county, N. Y. In order to make the building of the canal popular with the land owners the grading of the canal through the different farms was given to the owner. As the elder Archbald did not care to do it himself he let his son James do the work. In this way he was thrown into contact with the engineers. / His work as a contractor was well done; much to the surprise of the engineers. There was none of those attempts at cheating, so common on politically managed improvements. The engineer in charge was John B. Jervis, who afterward was the engineer who had charge of the building of the Delaware & Hudson canal. Being so well pleased with Mr. Archbald's work he offered him a position in the engineering corps. He then turned his attention to study to become an engineer. Mr. Jervis was soon after offered the charge of the newly begun Delaware and Hudson canal, and in the year 1825 Mr. Archbald was employed by him on it. He was placed under another engineer somewhat noted for his fast qualities, who, not finding any congeniality in the straightforward, honest assistant, asked for his removal on the ground that he would never make an engineer. Mr. Jervis at once assented, and to the general surprise made him resident engineer, in charge of that division, placing the engineer who sought his removal under him. / In 1829, the newly opened mines and railroad at Carbondale being in their incipient stages, the directors elected Mr. Archbald as superintendent, and after that time his life was principally passed in the Lackawanna valley. In 1836 or '37, William C. Bouck canal commissioner, and afterwards governor of the state of New York, offered him a position as engineer in charge of that portion of the canal between Utica and Troy, a distance of about 100 miles. This he accepted, much to the regret of the D. & H. Company. The strife and trickery of politics in the canal management so disgusted him, that on the continued solicitation of the D. & H. canal company to return, he once more took charge of the company's works. He continued in their employment until January 1, 1854. / In the early stages of the company's operations, economy was the order of the day. It is very probable that the combined salaries from the president of the company to the superintendent of canal and railroad and mine superintendents, did not amount to more than the president of the company alone gets today, and the minor officers of the company are paid in like proportion. / It has been over 40 years since Mr. Archbald left Carbondale, yet there are probably many of the older residents, miners and mechanics, who remember him. His superintendency covered a period of about 30 years. I do not think that during his residence here, he had an enemy, or that any complaint was ever entered against him, by any employe. He had the love and respect of every one. He was approachable at all times, by any of the company's men. If any one had any grievance he would listen to it and whatever he said or did in the premises, he went away satisfied. / As stated at the beginning, Mr. Archbald was a Scotchman, and for many years the several departments were under the control of Scotchmen. Mr. Archbald, general superintendent; Archibald Law, James Clarkson, Alexander Bryden, John Hosie and John Campbell mine superintendents. J. H. McAlpine, James Dickson, Andrew Nicol, Archibald McNeal and Andrew Wylie, all Scotchmen, in charge of other departments of the works. The following anecdote is related as happening with Mr. Archbald. A good natured Irishman approached him one day, when Mr. Archbald asked him 'What was his wish.' 'Well, Mr. Archbald, I should be pleased if you would make me a Scotchman.' / John M. Poor used to tell of a very wealthy man in Boston who always dressed in

very plain clothing. Sometimes an acquaintance would ask him, why a man of his known wealth should dress in such cheap clothing. He would answer: 'It makes no difference; everybody knows me here.' On one occasion when he visited London, his acquaintance saw him in the same plain suit. He asked why he dressed so plainly here in London, and received for reply that 'no one knows me here.' One who had heard Mr. Poor's story would readily think of it when seeing Mr. Archbald. Though his clothing was never shabby, he dressed exceedingly plain. He generally wore a suit of moleskin cloth, which was very generally worn then, by mechanics, being a very durable cloth and which was very suitable for wear in a position about the works. I have been told that on his visits to New York to get the money for payment of the men, [emphasis added] he wore the same moleskin, and on his return generally carried his money tied up in news or wrapping paper, while strangers would take him to be a mechanic or laborer going to his work, with a blouse or overalls wrapped in his bundle. / Mr. Archbald was in the habit of paying the men whose work was along the line of the road, in person. With his money in the pockets of his moleskin coat he would walk the track, on the rails, which were flat bars of iron nailed to wooden strips, over trestles as well as levels, to where the men were working. / A laughable episode occurred while on one of his trips over the road. Matthew Watt, well known by our older citizens, was working on the road near Waymart. The day was exceedingly hot, and Mr. Watt sought the shelter of a tree and began reading a paper. Mr. Archbald came along unobserved and spoke to him, asking him if that was the way he put in his time. Mr. Watt was greatly confused and finally blurted out: 'Mr. Archbald, I am not going to kill myself for the Delaware & Hudson company on such a hot day, if I never die.' / On one of his trips, he lost a quantity of money which was picked up by one of the Whites, either John or Luke. Mr. White related the circumstance to me many years ago. Mr. Archbald wanted to remunerate him for it but he refused any consideration. We do not know whether the world is growing worse, but we do not believe it would be safe for a paymaster to go in such a trustful manner, or that a large package of money lost would be so safely returned to the owner. / During M. Archbald's superintendency no mining was done to any great extent in the winter. On the opening of the canal in the spring, the first train of coal to go over the mountain was sent on Friday. If the road was not in readiness to do a full day's work, the season was commenced even with a single trip being sent over. I do not think he ever failed to start the season's work on Friday; so great was his opposition to the prevailing superstition that Friday is an unlucky day. [emphasis added] / At one of the elections here, Gideon Frothingham, a bother-in-law, knowing that Mr. Archbald did not have his naturalization papers here, challenged his vote. Although the election board felt satisfied that he had a right to vote, and would have received it, he refused to exercise the privilege. Mr. Frothingham sometimes would tell of the joke he played upon him. / Mr. Archbald was the first mayor after the organization of this city, and held the office for four terms. The city charter provided for a mayor's court, presided over by the president judge of this judicial district, styled 'recorder.' This being the case, the mayor's duties were limited to the appointment of policemen and the approval of ordinances passed by the councils. / In 1847 the Pennsylvania company commenced building heir railroad from Pittston to Hawley, and this was placed under Mr. Archbald's charge and constructed upon his plans. In 1854, Mr. Archbald was chosen vice president of the Michigan Southern and Northern Indiana railroad, when he dissolved his connection with the Delaware & Hudson company and Pennsylvania Coal company and took personal charge of the western road. His stay in the west was only for a year when he received

his final recall to the scene of his early labors. He then moved his family to Scranton, which he made his future home. / At the resignation of George W. Scranton as agent of the Delaware, Lackawanna & Western Railroad company, by a vote of the directors of said company Mr. Archbald was made general agent, and in 1858 he became its chief engineer, and was elected president of the Lackawanna and Bloomsburg railroad, both of which positions he held at the time of his death. / His active habits of life forbade his retiring from his customary pursuits. Until a short time before his death he possessed the elasticity and industry of younger days; rose with the early dawn and on a tramp over the mountains, could not be tired out by any man in the country. Esteemed most by those who knew him best he had the entire confidence and affection of the railroad managers and employes. The simplicity of his character, the purity of his life, and the uprightness of his dealings, have made him a synonym for honesty. He never failed in his word. He never refused a favor nor harbored an enmity. He never solicited an office. / In 1866 Mr. Archbald reluctantly accepted the unanimous nomination of the Republican party for congress, but was defeated by the boldest naturalization frauds ever witnessed in this country. / He was married Nov. 27, 1832, to Sarah Augusta Frothingham [whose brother Gideon was the engineer in charge of the construction of Planes Nos. 1 and 2 in Archbald in the early 1840s.] His death took place August 26, 1870. / The funeral obsequies were of a very demonstrative character, showing not only the love and esteem in which he had been held throughout the Lackawanna valley, but the great loss progressive enterprises had sustained. He was connected with the development of coal mining from its incipency, until its triumphant success. It was fitting then that his funeral should be reverently observed by every department of industrial operations. Resolutions of respect for his memory, and condolence for the bereaved family were adopted by the D. L. & W. R. R. Co., of which he was chief engineer; by the Lackawanna & Bloomsburg railroad, of which he was president; by the trustees of the Scranton Savings Bank, of which he was a member, and by the Scranton city councils. / The pall bearers were J. H. Scranton, John B. Smith, H. S. Pierce, Selden T. Scranton, James Blair, J. C. Platt, D. T. Bound, J. H. Sutphin, J. J. Albright, C. F. Mattes, W. R. Storrs and James Hosie."

Telegraph Excursus: 1844-1904

The First Telegraph Line became operational on May 24, 1844:

Samuel F. B. Morse's telegraph line (about 44 miles long, between Washington and Baltimore, alongside the route of the Baltimore & Ohio Railroad) was officially opened on May 24, 1844. The first message sent was the Biblical verse, Numbers XXIII, 23: "What hath God wrought!"

Philip Hone Speaks on the question of Samuel F. B. Morse as a painter:

In addition to his work in telegraphy, S. F. B. Morse was also a painter. In 1825, he and Asher B. Durand, Thomas Cole, Martin E. Thompson, and others founded the National Academy of Design "to promote the fine arts in America through instruction and exhibition." Following study in Europe, Morse put finishing touches on some commissioned painting he had bought back from Europe. His portraits reach for what he called 'Intellectual Imitation' (not likeness but analysis, inner revelation). Attending a National Academy of Design exhibition at the time, New York's former mayor, Philip Hone, observed that some of Morse's work looks frigid: "the warmth of the sunny skies of Italy does not appear to have had any effect upon the worthy president [of the NAD]. He is . . . well acquainted with the principles of his art; but he has no imagination." Quoted in *Lightning Man The Accursed Life of Samuel F. B. Morse* by Kenneth Silverman, New York, 2003, p. 128.

In 1848, the D&H Donated \$300 to aid in the construction of the Western Union telegraph line from Lake Erie to New York City via Carbondale, Honesdale, and Port Jervis:

In *A Century of Progress History of the Delaware and Hudson Company 1823-1923*, we read, on pp. 122-123: "On June 1, 1848, the company donated [at James Archbald's request] three hundred dollars in aid of the construction of a telegraph line from Lake Erie to New York City via Carbondale, Honesdale, and Port Jervis." Was that line completed in 1848? No, but in that year the D&H gave the \$300 to support the project. From the article given immediately below and an article on page 243, we learn that the telegraph came to Carbondale, via Montrose, in 1851.

At the same time, the D&H Authorized Western Union to Construct a Telegraph Line along its Right of Way:

". . . in 1848 the [D&H] canal company granted permission to an organization, out of which developed the Western Union Telegraph Company, to construct a telegraph line along its right of way. The line ran from Lake Erie following the turnpike through Owego, Montrose and Dundaff to Carbondale; thence along the right of way of the 'Gravity' to Honesdale, then down along the canal towing path to Port Jervis, from which place it followed the newly completed Erie Railroad [New York, Lake Erie and Western Railroad] to the Hudson River." Part VII of E. D. LeRoy's *Carbondale News* article (September 19, 1946) titled "Writer Recalls Early Rivalry between D. & H. Canal Men and Erie Workers"; reprinted from *Department of Internal Affairs Bulletin*.

Shown below is a line drawing of the D&H Canal at the bottom of the cliff at the Hawk's Nest. Note the telegraph poles and wire along the towing path.

This drawing was created by Manville B. Wakefield and is now in the collection of the D&H Canal Historical Society and Museum in High Falls, NY, where the author photographed it on October 23, 2013. It is not clear whether the telegraph line shown in the Wakefield drawing is intended as a representation of the Western Union line along the D&H Canal or the D&H's own telegraph line.



In April 1862, the New York state legislature allowed the D. & H. to run telegraph lines along the remaining sections of the canal to Kingston for company use.

Technological Note: glass insulators were discovered about 1850.

The first train to be run by telegraph was on the Erie Road in 1850:

“The First Train Run by Telegraph. / [From the Utica Observer.] / In 1850 the Erie road was in operation between Piermont and Elmira. The track was a single one, such a thing as a double track being then unknown in the country. Two years before, after much discussion and opposition, a telegraph wire had been put up along the line. Superintendent Minot, who was a man a long way in advance of the times, was a strong believer in the practicability of the telegraph as a facilitator of transportation on railroads. In the summer of 1850 he was a passenger one day on a westbound train over his road. The train he was on, according to the printed time-table, was to meet a through train from the West at Turner’s Station, forty-seven miles from New York. When Mr. Minot’s train reached Turner’s, he learned that the eastbound train was six hours late, owing to some mishap. Under the system of railroading then governing employes the westbound train had to remain at Turner’s until the delayed train passed the station. In fact, the whole business of the road from there west was at a standstill owing to the non-arrival of the train at the different stations where other trains were awaiting it. Superintendent Minot saw at once how ridiculous such a system was. There was a telegraph office at Turner’s and it was then the only one between that station and Jersey City. The Superintendent went to the office and made the operator’s hair stand by sending a message to the station agent at Port Jervis that he intended to run the train he was on from Turner’s to Port Jervis on the time of the belated eastbound train. He ordered the agent not to let any train leave that Station going east until the train he was on arrived there. He also ordered the agent to telegraph to him how he understood the message. The answer was satisfactory, and the Superintendent went to the conductor of the train and told him to start on with his train. The conductor refused to do so, and the Superintendent discharged him on the spot. Minot then ordered the engineer to pull out. The engineer said that he would not take the risk, and in the argument that followed the Superintendent dragged the engineer from the cab, gave him an elegant dressing out, and mounted the foot-board himself. He ran the train to Port Jervis and sent it on West as far as Narrowsburg before it met the late train, thus saving the passengers five hours, and settling forever the question of the accuracy of the telegraph in running railroad trains.” (*Carbondale Leader*, December 25, 1885, p. 4)

The telegraph came to Carbondale in 1851:

“TELEGRAPHIC.—It is no longer problematical whether we have a telegraphic office in our City—we have one! The machines were put up on Saturday last, but we understand that the office is not quite ready yet to receive business--some part of the “fixings” not being in order—but will be in the course of a few days. . . / So soon as the office gets into full operation we shall endeavor to obtain the latest news up to the hour of publication, and we hope to receive the approbation of our subscribers in the shape of an increased circulation. / P. S. We have learned at going to press, that every thing is “right” and the machinery works to a “charm.” / Good-excellent!” (*The Carbondale Transcript and Lackawanna Journal*, Friday, June 20, 1851, p. 2)

Durfee talks about the installation of the telegraph line through Carbondale:

"TELEGRAPH LINES. / Ithaca, Tompkins county, is the home and residence of Ezra Cornell. Probably many of the readers of the *Advance* recollect that nearly a quarter of a century since a telegraph line was put up through the city of Carbondale by said Cornell, extending from Buffalo, New York, to New York City, and that when his agent came through there he was looked upon as somewhat on the *luna*, and the cold shoulder was turned upon him. It being at a period of life that we had as soon engage in putting up telegraph lines as anything else, provided that we were well paid for it, accordingly we negotiated to provide ten miles of the poles, also to assist in putting up the line from Finch's Gate to Waymart, also to solicit subscriptions enough to ensure an office in Carbondale, for which one hundred dollars was required. But when the subject was presented to the people they seemed to say: / 'Think you that we're like mushrooms grown, / On moss upon the smooth flint stone?' / What need we of a telegraph line (suppose the thing does operate) when we have a regular stage that leaves here every day for New York, and one to Wilkesbarre every other day, and we can send letters to either place and get an answer the same week. Another engaged in the stage business objected on account of its interfering with the postal arrangements, and thereby losing his mail money. Another one, whose white hair told of his advanced age, superintendent of the company's machine shop, says, 'When are you going to get your telegraph a going? I want to go to New York—but won't my pants get demoralized going over the poles?' But working along up the line the questions were still more amusing. One says, 'Won't it kill off all the birds?' Another says, 'Suppose I have a *letter* come how shall I stop it?' A lad far more acquainted with running coal than transmitting messages, says 'Why, jump on the brake and slide all four wheels.' Another says, 'I wish the line came a little nearer my *windy*, and I'd slip a letter on and they'd never know it.' / At Honesdale the people arose *en masse* that the thing should not go through their streets. The idea of poles being set up through their streets was perfectly ridiculous, and had it not been that the late lamented Col. Seeley came home from New York, and told them that telegraph poles were up all through Broadway, the line would have had to gone by way of the 'Little Church around the Corner'; but through his influence enough of the stock was taken to secure an office, and for one or two years the people went there to do their telegraphing. All that time all the court business had to be done at Wilkesbarre, so that after a year or two the people awoke from their Rip Van Winkle sleep and constructed a line to Wilkesbarre, and opened an office so as to work both lines." *Reminiscences of Carbondale, Dundaff, and Providence Forty Years Past* by J. R. Durfee (Philadelphia: Miller's Bible Publishing House, 1875), Chapter XXVIII, pp. 118-120.

The telegraph line: Carbondale to Pittston and beyond:

"**Telegraph News.** / The good people of this city, by the exercise of a small amount of liberality and public spirit, have now an opportunity of securing the advantages of a line of Telegraph from here to Pittston, there forming a junction with a line now in operation through and touching Wilkes-Barre, Tamaqua, Pottsville, Easton, Philadelphia, New York, Harrisburg, or wherever else they may wish to send. The Messrs. Scranton have already made preliminary arrangements for extending a line along the Delaware and Cobb's Gap Railroad, now in process of

construction to the New Jersey Central road and thence to New York City, thus giving us a direct and reliable line of communication to New York. Upon this line will be used House's instrument, which prints the message direct in Roman characters, thereby avoiding in a great measure, the mistakes that sometimes occur through transmitting from Morse's machine. At about the middle of November, the people will be invited to say how many shares, at \$25 each, they will take in the enterprise. / We are informed that a subscription on the part of the people of this city of \$2,000 will secure the line, to be put in operation early next spring. The line terminating at Wilkes-Barre we are informed has regularly paid ten per cent. on the investment, over and above all expenses, and surely we might safely calculate that a reliable line from here connecting with Scranton, Pittston, Wilkes-Barre, New York, and other places with which our people have constantly more or less business, would pay well as an investment, independent of the great convenience of having at hand a reliable means of communication in all cases of emergency." (*Carbondale Transcript and Lackawanna Journal*, October 28, 1853, p. 2)

Laying a telegraph cable across the Atlantic:

"Atlantic Telegraph. / This great project has disappointed the hopes of its friends, and they comprise the people of England and America. It is, at least for the present, a failure. Three attempts and as many breakages have occurred in mid-ocean, and despairing of success, the vessels have returned to port with the loss of about 400 miles of cable. Some still hope for ultimate success, by using different machinery for paying it out." (*Carbondale Advance*, July 24, 1858, p. 2)

To be laid, the cable must be "reeled" from one ship sailing West to East:

"The Atlantic Telegraph. / Professor Morse has given his opinion in regard to the Atlantic Telegraph cable. / He says he never expected the late attempts would be successful, but that it can be done. His views being averse to the *manner* of constructing and laying the cable, he was at the election for Directors of the Company left out of the Board. His views are worthy of attention. Other scientific men have given opinions embracing the following points:-- / 'A cable *coiled* cannot be uncoiled without *kinks*; therefore the cable must be *reeled* to be laid.' / 'The necessity for two vessels to lay the cable quadruples (and more) the risk of accidents; therefore the cable must be laid from one ship.' / 'The voyage to England is easier, shorter, and safer than the voyage from England; therefore the vessel with the cable should start from this side.' / 'There is one vessel, and one only, of tonnage and room sufficient to carry the whole cable, to wit, the Leviathan; and the Leviathan must sail from our shores.' " (*Carbondale Advance*, July 31, 1858, p. 2)

The cable across the Atlantic is successfully laid:

The first "despatches" were sent on Thursday, August 5, and an announcement to that effect was published in *Carbondale Advance* on Saturday morning, August 7, 1858:

“The Atlantic Telegraph. / The American public were on Thursday [August 5, 1858] astounded with Telegraphic despatches announcing the complete success of this great project. Not only success, but so speedily and unexpectedly realized as to stagger belief.” (*Carbondale Advance*, Saturday Morning, August 7, 1858, p. 3)

“TELEGRAPHIC! / BY ATLANTIC TELEGRAPH! / IMPORTANT FROM IRELAND / ‘COAST OF IRELAND. / Friday, Aug. 6, 1858 -- 8 A.M. / The Agememnon [sic] had not arrived at Valencia Bay last evening at 8 o’clock, but was very near the coast. The communication is perfect from the Agememnon [sic] to Trinity Bay!’ “ /-----Shade of the Old Milford & Owego Turnpike! -----Stage Coachers touch up your leaders!! -----From Ireland to Carbondale in FOUR HOURS!!!-----Surely, have we not lived long enough? -----What next???” (*Carbondale Advance*, Saturday Morning, August 7, 1858, p. 3)

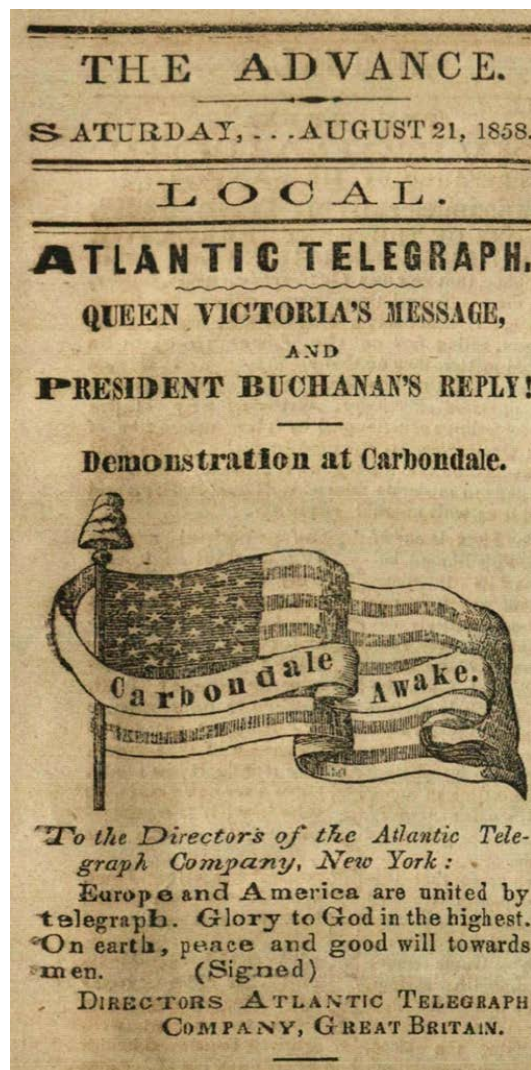
Published in the *Carbondale Advance* on Saturday Morning, August 14, 1858 (p. 3) was the following description of the celebration that took place upon receipt of the news in Carbondale of the success of the Atlantic cable:

“The unexpected, but welcome and glorious intelligence that the Submarine Cable had been successfully laid, caused great excitement in our city.—The telegraph office was thronged, as well as the streets, by eager and expectant countenances, all seeming to inquire ‘How and when was it done!’ Everybody was nonplussed, excited, bewildered, confused, hopeful, and thankful, and as soon as the good news was credited, subscriptions were circulated and a large quantity of powder collected for a suitable demonstration. In the evening a cannon was procured and salutes were fired in rapid succession for a long time—probably 200 guns.” (*Carbondale Advance*, August 14, 1858, p. 3)

In the *Carbondale Advance* published on August 21, 1858, we read:

“Atlantic Telegraph. / This great enterprise is a success, a complete and surpassingly glorious triumph. Every lingering fear is at last removed. We can now be jubilant without danger of its being premature, and liable to reverse by next mail, as the most sanguine feared a week ago. The two leading nations of the two Hemispheres, and with them all other civilized nations, are in almost instantaneous connection by means of the electric cable. / The governmental disseverment of the mother and daughter has ever since been celebrated by us as a grand holiday, a noted epoch of time, so may be our new electric connection. Each may now know daily all the great movements of the other in business, government and policy. This grand achievement in effect brings the whole world at our doors, and spreads out its business and events before us in daily panoramic view. / There is a grandeur in this result almost too great for our conception.—It

gives our narrow, plodding visions the greatest shock it has had for many a day. We must wake up and work up to the new order of things. The nineteenth century is prolific of marvels, but of all none will perhaps have so important a bearing upon the world's destinies and the world's evangelization as this last over which we now rejoice. / The N. Y. Dailies note Telegraph celebrations *everywhere* throughout our country—filling each day several columns. No mention has been made of ours—while those at Scranton and Wilkesbarre have place. Why! there was more of a demonstration in Carbondale than in all Luzerne [Carbondale was still a part of Luzerne County in 1858] beside.—All the noise that powder, bells, and lungs combined could make was made, and an illumination so brilliant was had by means of a pyramid of combustibles on the Public square, that persons residing in neighboring towns thought that Carbondale was again on fire.” (*Carbondale Advance*, Saturday Morning, August 21, 1858, p. 2)



(*Carbondale Advance*, Saturday, August 21, 1858, p. 3)

QUEEN'S MESSAGE. / *To the Honorable the President of the United States:* Her Majesty desires to congratulate the President upon the successful completion of this great international work, in which the Queen has taken the deepest interest. / The Queen is convinced that the President will join her in fervently hoping that the electric cable which now connects Great Britain with the United States, will prove an additional link between the nations, whose friendship is founded upon their common interest and reciprocal esteem. / The Queen has much pleasure in thus communicating with the President, and renewing to him her wishes for the prosperity of the United States. / **THE PRESIDENT'S REPLY.** / Washington City, Aug. 16, '58. / *To Her Majesty, Victoria, Queen of Great Britain:* / The President cordially reciprocates the congratulations of Her Majesty, the Queen, on the success of the great international enterprise, accomplished by the science, skill, and indomitable energy of the two countries. It is a triumph more glorious, because far more useful to mankind, than was ever won by conqueror on the field of battle. / May the Atlantic Telegraph, under the blessing of Heaven, prove to be a bond of perpetual peace and friendship between the kindred nations, and an instrument destined by Divine Providence to diffuse religion, civilization, liberty and law throughout the world. In this view will not all nations of Christendom spontaneously unite in the declaration that it shall be forever neutral, and that its communication shall be held sacred passing to their places of destination even in the midst of hostilities? / JAMES BUCHANAN." (*Carbondale Advance*, Saturday, August 21, 1858, p. 3)

The celebration in Carbondale when the success of the Atlantic telegraph was announced:

"On Monday night our usually quiet city [Carbondale] celebrated the arrival of Queen Victoria's Message to the President of the United States, according to the Programme of Mayor Poor, with variations never conceived or heard of. / At half past nine o'clock, P. M., the bell in the tower of the Trinity Church gave the signal which was immediately taken up by the bells of the other churches, and although means had been used to give notice, yet the simultaneous ringing of all the church bells brought men, women and children into the streets as for a fire; and as the night was fine, one grand rush was made for the Parade Ground, while a general 'Hurra' was heard from all—and the City was given up for half an hour to such '*noise and confusion*' as even General Cass never dreamed of. Firemen dashed through the streets with their fire apparatus—Store waggons were run by men to the Parade Ground loaded with sugar barrels, flour barrels, grease barrels, tar barrels, pork barrels, dry goods boxes, and everything of a combustible nature that co'd be laid hold of was confiscated and taken, and such a bon fire as was kept up for four hours never before was seen in Carbondale. We have heard the boxes burned on the occasion estimated at hundreds and the barrels at thousands. Discharge of cannon, fire works, and fire balls gave variety to the entertainment. When the bell ringing had ceased and partial order was restored, the dispatch was read by Mayor Poor from the balcony of the Harrison House to the people below, who rent the air with three tremendous cheers. Speech followed speech from a great number of our citizens, even from those who were never known to speak in public on any previous occasion, and it was astonishing to see how eloquent they were; in fact the enthusiasm

of the people carried the speakers and every thing else away. It was a popular outbreak—like the rushing of mountain torrents, no power could restrain it.” (*Carbondale Advance*, Saturday, August 21, 1858, p. 3)

The telegraph line between Carbondale and Honesdale now in operation:

“The Delaware and Lackawanna Telegraph Line is now in operation between this place and Honesdale. In about one week it will be completed to Narrowsburg. It has been entirely rebuilt—and we are assured the public will find it as reliable a means of communication as any in the country.” (*The Advance*, September 25, 1858, p. 2)

D&H Authorized in 1861 to Construct in Pennsylvania Telegraph Lines along D&H Gravity and Canal; also to Scranton

On April 11, 1861, the Pennsylvania legislature approved an act titled "A Supplement to An Act Entitled 'An Act to Improve the Navigation of the River Lackawaxen,' Passed the 13th Day of March, 1823." In section 1 of that act we read: " . . . the President, Managers and company of the Delaware and Hudson Canal Company, be, and they are hereby authorized and empowered to erect, construct and maintain Telegraph Lines and communications along the line of the said canal and railroad, commencing in the county of Pike, at or near where said company's canal crosses the river Delaware, and from thence along the line of said canal to the southern boundary line of the borough of Honesdale and from thence along the line of the said company's railroad to the terminus thereof, in the county of Luzerne, with the further power and authority of extending the said Telegraph Lines into the borough of Scranton, Luzerne County, or along the line of any future lawful continuation of said railroad. . . "

April 11, 1861: Supplement to the March 13, 1823 passed by the Pennsylvania Legislature (regarding the improvement of navigation on the River Lackawaxen), authorizing maintenance of telegraph lines in Pennsylvania. Here is the text of that law:

LAWS OF 1861, No. 275.

A SUPPLEMENT TO AN ACT ENTITLED "AN ACT TO IMPROVE THE NAVIGATION OF THE RIVER LACKAWAXEN," passed the 13th Day of March, 1823.

SEC. 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same, That the President, Managers and Company of the Delaware and Hudson Canal Company, be, and they are hereby authorized and empowered to erect, construct and maintain Telegraph Lines and communications along the line of the said canal and railroad, commencing in the county of Pike, at or near where said company's canal crosses the river Delaware, and from thence along the line of said canal to the southern boundary line of the borough of Honesdale, and from thence along the line of the said company's railroad to the terminus thereof, in the county of Luzerne, with the further power and authority of extending the said Telegraph Lines into the borough of Scranton, Luzerne County, or along the line of any future lawful continuation of said railroad; and the said company, and all such persons as they may authorize and employ, shall have power and authority to enter into and upon, hold, occupy and enjoy any land necessary for locating, constructing, maintaining, using and repairing of the said Telegraph Lines and fixtures, necessary thereto. And the same to be so erected and constructed as not to interfere with the common use of any road, highway, streets or waters.

Authorized to construct telegraph lines.

Right to take land.

SEC. 2. That they are hereby authorized and empowered to construct and maintain, not exceeding two miles in length, branch or lateral roads, or track, from or to connect with their present railroad as the same is now erected and constructed, with the necessary branches and fixtures for the purposes of their coal business. The damages for taking lands in and for the construction of said Telegraph Lines, and of said branch or lateral railroads, and also for the construction of any other lawful extension of their works, within their chartered limits in this state hereafter made, and of any necessary devices, fixtures or appurtenances connected therewith, to be assessed and secured in the manner pointed out in the provisions of an act, passed the seventh day of April, one thousand eight hundred and fifty-eight, entitled "A supplement to an act to improve the navigation of the river Lackawaxen, passed the thirteenth day of March, one thousand eight hundred and twenty-three."

Authorized to construct branch railroads.

Assessment of damages.

ELISHA W. DAVIS,
Speaker of the House of Representatives.

JOHN P. PENNEY,
Speaker of the Senate (pro tem.)

APPROVED—the 11th day of April, A. D. 1861.

A. G. CURTIN.

Space ad in the January 21, 1861 (p. 2) issue of the *Carbondale Advance*:

"Del. & Hud. Canal Co.'s / TELEGRAPH LINE! / Extending from / Scranton Pa., to
Narrowsburg, N. Y., / And connecting with all the principal cities and towns in the / United
States and Canada. / All messages guaranteed the strictest privacy. / The line has lately been /
REBUILT, NEWLY INSULATED, / New Offices Established, and / **TARIFF REDUCED.** /
Chas. Petersen, Supt. / OFFICES / Del., L. & W. R. R. Depot, Scranton / Del. & Hud. Canal Co.s
Office, Providence / Del. & Hud. Canal Co.s Office, Olyphant; Del. & Hud. Canal Co.s Office,
Archbald / Del. & Hud. Canal Co.s Office, Carbondale / Del. & Hud. Canal Co.s Office,
Waymart / C. Petersen's Store, Honesdale / N. Y. & Erie R. R. Depot, Narrowsburg. / Dec. 21,
'61 n30"

Space ad in the February 23, 1861 issue (p. 3) of the *Carbondale Advance*: “**Delaware & Lackawanna Telegraph** / Connecting with all the principal Cities and Towns in the United States and Canadas. / OFFICE—Delaware & Hudson Canal Company’s Office, Carbondale, PA. / Carbondale, January 26, 1861”

Delaware & Lackawanna Telegraph
CONNECTING with all the principal Cities and
Towns in the United States and Canadas.
OFFICE—Delaware & Hudson Canal Company’s
Office, Carbondale, Pa.
Carbondale, January 26, 1861. 2m

D&H Authorized in 1862 to Construct Telegraph Lines along D&H Canal in New York:

On April 17, 1862, the legislature of the state of New York passed "An Act to Authorize an Empower the President, Managers and Company of the Delaware and Hudson Canal Company to Erect Telegraph Lines along the Line of said Company's Canal." Therein we read: "The President, Managers and Company of the Delaware and Hudson Canal Company be, and are hereby authorized and empowered to erect, construct and maintain telegraph lines and communications, with the necessary appendages thereto, for the use and enjoyment of the same, along or near the line of their canal, in the counties of Sullivan, Orange and Ulster, between the rivers Delaware and Hudson, commencing on the river Delaware, opposite or near the mouth of the Lackawaxen river, with the privilege (in order to make said lines no longer than necessary) of running or constructing the same so far from said canal as may be necessary therefor, and of connecting the same with any other telegraph lines at either terminus thereof, or at any intermediate point along or near to the line thereof, between the same; and of transmitting communications long the same, or any part thereof, for any person desiring the same, not taking messages for or transmitting the same for other parties than said company, between points or places where existing telegraph companies have offices for transmitting messages, and collect and receive compensation to be regulated by said company therefore.. . ."

Here is the complete text of the act which became law on April 17, 1862:

CHAPTER 314. LAWS 1862.

AN ACT TO AUTHORIZE AND EMPOWER THE PRESIDENT, MANAGERS AND COMPANY OF THE DELAWARE AND HUDSON CANAL COMPANY TO ERECT TELEGRAPH LINES ALONG THE LINE OF SAID COMPANY'S CANAL.

Became a law April 17, 1862, with the approval of the Governor. Passed, by a three-fifths vote.

The People of the State of New York, represented in Senate and Assembly, do enact as follows :

Section 1. The President, Managers and Company of the Delaware and Hudson Canal Company be and are hereby authorized and empowered to erect, construct and maintain telegraph lines and communications, with the necessary appendages thereto, for the use and enjoyment of same, along or near to the line of their canal in the counties of Sullivan, Orange, and Ulster, between the rivers Delaware and Hudson, commencing on the river Delaware, opposite or near the mouth of the Lackawaxen river, with the privilege (in order to make said lines no longer than necessary,) of running or constructing the same so far from said Canal as may be necessary therefor, and of connecting the same with any other telegraph lines at either terminus thereof, or at any intermediate point, along or near to the line thereof, between the same ; and of transmitting communications along the same or any part thereof for any person desiring the same, not taking messages for, or transmitting the same for other parties than said Company between points or places where existing telegraph Companies have offices for transmitting messages, and collect and receive compensation, to be regulated by said Company, therefor ; and are hereby empowered by themselves, agents, or persons by them employed, with the necessary teams, wagons, vehicles and instruments, to enter upon, hold, occupy and enjoy any land necessary therefor, with the fixtures necessarily appurtenant thereto, the same to be so constructed and maintained as not to interfere with the common use of any road, highway, streets or waters. The damage for entering upon, taking or enjoying the lands necessary for the construction and maintaining of said lines, and appurtenances necessary for the enjoyment of the same, to be assessed and secured as is provided by the eleventh and the twenty-second sections of an act entitled "An Act to incorporate the President, Managers and Company of the Delaware and Hudson Canal Company," passed April twenty-third, eighteen hundred and twenty-three.

Company
authorized to
construct tele-
graph lines.

Authorized to
take land.
Assessment of
damages.

2. This act shall take effect immediately.

The first wire owned by the D&H:

"In 1862 Charles Petersen ran the first wire owned by the Delaware and Hudson Canal Company—an experimental line from Honesdale to Lackawaxen—obtaining permission from the superintendent, R. F. Lord. It proved successful, and its great value being immediately recognized it was quickly extended to Rondout, on the Hudson, and then west to Carbondale. Mr. Petersen has been superintendent of the company's lines ever since." (*History of Wayne, Pike and Monroe Counties, Pennsylvania* by Alfred Matthews, 1886, p. 376)

Telegraph Lines being put up between Lackawaxen and Rondout:

"DEL. & HUD. TELEGRAPH LINE.—We are informed by the Superintendent of the D. & H. Canal Co's Telegraph, Mr. Charles Petersen, that the wires are now being put up between Lackawaxen and Rondout on this line, with the prospect of completion in the course of two weeks. This line will undoubtedly prove a great convenience to the community living on its route, passing as it does through a section of country never before supplied with telegraphic

facilities, and connecting by a short cut, the Hudson river with the Delaware.—*Wayne Co. Herald.*" (*Carbondale Advance*, August 16, 1862, p. 2)

The telegraph line between Scranton and Rondout now in complete working order:

"DEL. & HUD. CANAL CO.'S TELEGRAPH / --This line is now in complete working order from Scranton, Pa, to Rondout, N. Y., and is open for business at any of the following offices along its route:--Scranton, Providence, Olyphant, Archbald, Carbondale, Waymart, Honesdale, Hawley, and Lackawaxen, Pa., and Barryville, Port Jervis, Huguenot Springs, Wurtsboro, Phillipsport, Ellenville, Kerhonkson, Rosendale, High Falls, Eddyville, and Rondout, N. Y. All communications are guaranteed the strictest privacy, and will be forwarded to all parts of the country, at the most reasonable rates. Mr. Charles Peterson, of this borough, is the efficient superintendent.--*Wayne Co. Herald.*" (*Carbondale Advance*, September 20, 1862, p. 2)

Telegram, in the collection of the Lackawanna Historical Society, dated December 22, 1868, sent to William Silkman in Providence by R. C. Smith, Wilkes-Barre. The message: "If convenient meet me at the Second National Bank at Scranton Will be up on the Noon train." The telegram was sent by the "Delaware & Hudson Canal Company's Telegraph. / Connecting at Honesdale with the Western Union Telegraph Lines." The telegraph superintendent was C. Petersen.

DELAWARE & HUDSON CANAL COMPANY'S TELEGRAPH.	
Connecting at Honesdale with the Western Union Telegraph Lines.	
No.	A.
TO THE PUBLIC.	
<small>The nature of the Telegraph business is such that errors and delays are occasionally unavoidable. The payment of once and a half the amount of the usual tolls on any Message will insure correct delivery by a repetition of such Message from the place of destination to the party sending it. On Messages not so repeated and insured, no responsibility for error or delays in transmission will be assumed beyond the amount of tolls, and in no case for errors or delays occurring on other lines.—C. PETERSEN, Supt.</small>	
To <i>Mr Silkman</i>	From <i>Wilkes Barre</i> Dated <i>22^d</i>
<i>Providence</i>	Rec'd <i>Dec 22^d, 1868</i> M.
<i>If convenient</i>	
<i>meet me at the Second National</i>	
<i>Bank at Scranton Will be up on the</i>	
<i>Noon train</i>	
<i>R. C. Smith</i>	

International Cable Jubilee held in September 1868:

"International Cable Jubilee.—By common consent, there will be a great international Cable Jubilee throughout Great Britain, the United States and Canada, on September 1st and 2nd." (*Carbondale Advance*, August 21, 1868, p. 3)

Professor Morse honored at banquet at Delmonico's:

"**Honors to Prof. Morse.** / A complimentary banquet was given to Prof Morse, Inventor of the Magnetic Telegraph, at Delmonico's, N. Y., on Tuesday evening. Chief Justice Chase presided, and speeches were made by Mr. Thornton the British Minister, Prof. Morse, Prof. Godwin Smith, Hon William M. Evarts, Gen. McDowell, Gov. Curtin, Hon. William E. Dodge and others." (*Carbondale Advance*, January 2, 1869, p. 3)

Charles F. Timmons was the telegraph line foreman with the D&H in Carbondale in the 1870s:

". . . in the [eighteen] seventies, the father of Frank C. Timmons, Charles F. Timmons, became. . . telegraph line foreman with The Delaware and Hudson Canal Company at Carbondale." (Biographical portrait of Frank C. Timmons, pp. 147-148 of *The Delaware and Hudson Railroad Bulletin*, October 1, 1933). Charles Timmons previously served as a military telegraph lineman with the Union Army during the last three years of the Civil War, serving under Generals McClellan and Grant. The military telegraph department was responsible for the maintenance of communications between the front and Washington as well as between the different units of the army. Before he became the line foreman at Carbondale, in the 1870s, Charles F. Timmons held positions with the Pennsylvania Railroad and the Lehigh Valley Railroad.

John Robertson obtains patent for telegraph bracket and insulator:

"**New Telegraph Bracket and Insulator.** / John Robertson, esq., of this city, has recently received a patent for an 'Improved Telegraph Bracket and Insulator.' It possesses many advantages over any heretofore used, and should be generally adopted." (*Carbondale Advance*, March 9, 1872, p. 3)

Death of Samuel F. B. Morse:

"Prof. Samuel F. B. Morse, the 'Father of the Telegraph,' died in New York on Wednesday." (*Carbondale Advance*, April 13, 1872, .p. 2)

Telegraph rates reduced:

"On or after the 1st of September 1872, the local rates on the lines of the Del. & Hud. Canal Company's telegraph will be reduced as follows: For 100 miles or less, 25c. - 2; for over 100 miles, 35c. - 3. On through messages, from any point sent via Rondout, Honesdale or Scranton, 20c. - 2." (*Carbondale Leader*, August 31, 1872, p. 3)

All D&H telegraph operators must be able to read by sound:

“—It is stated that the D. & H. C. Co. has recently issued orders to the effect that all the telegraphic operators in its employ must be able to read messages by sound. This sounds like business.” (*Carbondale Leader*, January 22, 1876, p. 3)

“The Delaware and Hudson Canal Company have notified all their station agents that telegraphic operators must be employed who can read messages by sound.” (*Carbondale Advance*, September 22, 1876, p. 3)

Charles Petersen was the first D&H Superintendent of Telegraph:

On January 1, 1879, Frank C. Timmons (see: Biographical portrait of Frank C. Timmons, pp. 147-148 of *The Delaware and Hudson Railroad Bulletin*, October 1, 1933), "who from boyhood had wanted to become a telegrapher, began his career as a messenger at Carbondale. . . , handling messages to and from Thomas Dickson, at that time president of our company, in what was then the central telegraph office of the Pennsylvania Division, from which point messages originating at local stations were relayed to their destinations on other divisions or railroads, and vice versa. / At the time Frank entered the company's employ [1879], Charles Petersen was Superintendent of Telegraph, with offices at Honesdale, Pa. Several years before he became connected with the railroad Mr. Petersen had built a commercial telegraph line along the highways from Narrowsburg on the Delaware and Hudson Canal, through Honesdale and Carbondale to Wilkes-Barre, where it terminated in a drug store. Early in the sixties Mr. Petersen and the other owners of the line sold it to The Delaware and Hudson Canal Company, and its wires were transferred from the roads to the Gravity Railroad right of way from Honesdale to the foot of 'G' plane at Olyphant, thence along the steam railroad line to Plymouth Junction. Mr. Petersen became the first Delaware and Hudson Superintendent of Telegraph, and it was in this capacity that he hired Mr. Timmons."

Telegraph offices on the D&H main line track between Scranton and Carbondale closed at 8 o'clock:

1879:"It was then late in the evening and, as there were no telegraph offices open on the single-track main line [between Scranton and Carbondale] after 8 o'clock, he [Engineer Oscar Histed, in charge of D&H engine No. 26 on February 3, 1879 on its return run to Carbondale] had to hire a horse and carriage at a nearby livery stable, drive to the Carbondale roundhouse, get another engine, and pull his train in off the main track before the early morning passenger trains began to shuttle back and forth between Carbondale and Scranton. . ." (Biographical sketch of James A. Farrell—"The Engineer Hired a Horse"—in the July 1, 1932 issue (pp. 195-96, 203) of *The Delaware and Hudson Railroad Corporation Bulletin*)

Telegraph line installed between D&H freight office and general office:

"A new telegraph line has been built from the D. & H. freight office to the general office. It makes it very handy for all concerned. John F. Wheeler handles the key on one end, while T. G. Smith officiates at the other end." (*Carbondale Advance*, October 25, 1879, p. 3)

Thomas Bowers begins work in the telegraph office:

"Mr. M. E. Johnson has taken his departure to the West, and his position in the telegraph office has been filled by the appointment of Thomas Bowers, who has been way-bill clerk in the D. & H. Coal office. Mr. Bowers' position is filled by the appointment of H. C. Butler, lately clerk in the locomotive shop, and the latter place has been filled by the appointment of John Reese, formerly a LEADER typo. We hope this line of promotions will prove mutually satisfactory both to the employers and the promoted officials." (*Carbondale Leader*, November 11, 1881, p. 4)

Johnson telegraph operator goes west for a job:

"M. E. Johnson, telegraph operator at this station, and extensively known as correspondent of the *Scranton Daily Republican*, left on Wednesday morning for a position offered in the west. Report says the new location is Ottumwa, Iowa. . ." (*Carbondale Advance*, November 12, 1881, p. 3)

Johnson telegraph operator returns East and gets a job in the Erie telegraph office:

"M. E. Johnson, well known as a telegraph operator, and correspondent of the *Scranton Daily Republican*, in this city, whose going west we chronicled some weeks ago, has returned and accepted a desirable position in the Erie telegraph office here. He is welcome back." (*Carbondale Advance*, December 10, 1881, p. 3)

Frank Vandling became D&H telegraph operator at Providence in 1882:

Frank M. Vandling "learned telegraphy in the Western Union Telegraph office at Harrisburg and at the age of sixteen, in 1882, was appointed operator for the Delaware & Hudson Canal Company at Providence. Almost immediately, however, he was made weighmaster and coal inspector of the same company at Moosic. A year later he became general coal inspector for the company on the Wilkesbarre Division, continuing in that position, with headquarters in Scranton, from August, 1883, until he was made postmaster ten years later. The position was one of responsibility, from eight to nine thousand tons of coal being shipped from the division every day. / At Scranton occurred the marriage of Mr. Vandling to Miss Helen J. von Storch, daughter of Theodore von Storch, a large real estate operator here." *Portrait and Biographical Record of Lackawanna County Pennsylvania*, pp. 146-147, Frank M. Vandling biography.

The boys on the summit and at No. 9 will learn telegraphy:

"The boys on the summit and at No. 9 have sent for instruments and will learn the art of telegraphing." (*Carbondale Leader*, August 10, 1883, p. 2)

Gravity workers at No. 9 now learning telegraphy:

1883: "The telegraph instruments for No. 9 came, and are working to perfection. The Western Union will soon be able to find expert operators on the gravity." (*Carbondale Leader*, August 17, 1883, p. 2)

Telegraph operators' strike ends:

"The long strike of the telegraph operators has collapsed, and the old operators have all applied for their former situations, but many of them are ruled out and new hands have been employed in their places." (*Carbondale Advance*, August 25, 1883, p. 3)

The telegraph wire on Level No. 7 now runs along the parallel railroad:

"The Western Union linemen are repairing the wire over the mountain. The poles have been changed on No. 7 level so that the wire now runs along the parallel railroad. Perhaps Engineer Blake of the valley road can tell us what a parallel railroad is." (*Carbondale Leader*, August 31, 1883, p. 2)

Seven wires now on Postal Telegraph line:

"Another wire has been added to the Postal Telegraph line making seven wires now ready for messages. There is still room on the poles for five wires." (*Carbondale Leader*, March 6, 1885, p. 1)

Telegraph operator (Frank Timmons) comes to the aid of a runaway boy:

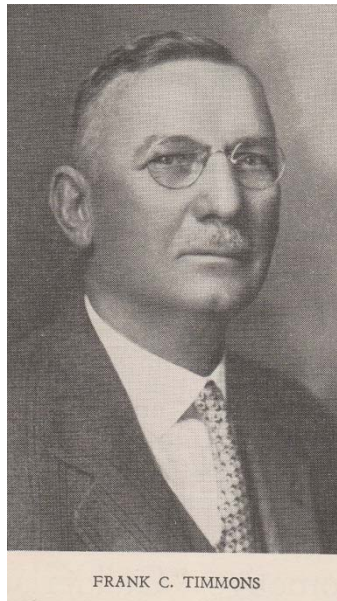
"A RUNAWAY FOUND. / A Grandson of a Hazleton Millionaire Runs Away From School and Turns up in This City in Distress. / Last Thursday's New York *Tribune* contained an account of the strange disappearance of Calvin Pardee, jr., a boy 14 years of age, from a school he was attending at Cornwall-on-the-Hudson, and an offer of \$100 reward from his father for information of his whereabouts. On Friday evening about half past six a boy, begrimed with coal-dust, walked into the Western Union Telegraph office in this city and said that he wanted to send a message to his father in Hazleton, but that he had no money. He wanted to get something to eat and a place to sleep, as he was tired out and starved out. When he was interrogated, he gave an account of his expedition and his reasons for running away. He ran away from the Cornwall school, he said, because they were all 'kids' that attended there, and he had got tired of associating with 'kids.' As before stated he is only 14 years old himself, and when he made this statement about the 'kids' with a tone of disgust, it created a broad smile on the faces of his questioners. He said he was going to school at Troy or nowhere. When he left Cornwall he had only a dollar in his pocket. He spent eighty cents of it to get to Rondout and the remaining twenty cents in Rondout to get something to eat. Boatmen gave him a ride from that place to Honesdale on the Delaware and Hudson Canal, and at Honesdale, failing to get permission to ride over the gravity on the coal cars and not being able to borrow any money with which to buy a ticket, he walked down the line of cars, slyly jumped into an empty dump and then stole a ride to this city. Frank Timmons, the telegraph company's line repairer, took charge of him, escorted him to a hotel where he saw that he was properly cared for and telegraphed the news to the boy's father. When a friend arrived the next to take the truant home, a broad smile broke over his face that plainly showed that he would be glad enough to get back into parental arms. His grandfather, Ario Pardee, of Hazleton, is a man of immense wealth, being credited with an estate of

\$10,000,000, and who not long ago built the magnificent Pardee Hall for Lafayette College, and endowed that institution with a half million dollars. The \$100 reward for information of the runaway's whereabouts will probably be sent to Mr. Timmons, or it ought to be." (*Carbondale Leader*, November 17, 1885, p. 4)

The career of Frank C. Timmons with the D&H:

". . . After one year and four months as a [telegraph] messenger, Frank [Timmons; see: Biographical portrait of Frank C. Timmons, pp. 147-148 of *The Delaware and Hudson Railroad Bulletin*, October 1, 1933], then seventeen [born February 23, 1863 in Washington, DC] was transferred to his father's line gang, 'put on the hooks,' and began to learn the work as a lineman's helper at \$1.50 per day, whether the day was 10 hours, or, in an emergency 20 hours. The telegraph wires then carried 80 to 100-volt current; today the through line between Wilkes-Barre and Albany is operated with 180-volt current at Wilkes-Barre, 150 volts at Albany, while the local wires carry from 110 to 120 volts. / In those days there were times when there were not enough train service men available on the steam railroad and in 1883 Superintendent R. Manville offered Frank a job as a fireman, a line of work he had often felt inclined to enter. Three months' experience was sufficient to convince him otherwise, however, and on October 1, 1883, he returned to the Telegraph Department to assume charge of the gang during his father's illness. The following March, at the age of 21 years, he succeeded his father as foreman and continued in a supervisory capacity in the Telegraph, and later the Signal Department, for the next 50 years. / The telephone was first used on the Pennsylvania Division in about 1888, when a system was installed to provide communication between the various offices in the Carbondale Yard. / In 1895, the Hudson River Telephone Company, now a part of the Bell system, built two circuits from Carbondale to Honesdale, along The Delaware and Hudson Gravity Railroad, and gave one, together with nine instruments, to our company in return for the use of the right of way. The instruments then in use were what are known as wall telephones, each being provided with a magneto to generate the current used in signaling other stations, and dry cell batteries to carry on the conversation. / Approximately thirty years ago electric motors were first used to replace steam engines in supplying power for the machinery in the various shops on the division. When installations of small motors to run individual machines proved practical, larger units, to provide power for entire shops, were placed in operation by Mr. Timmons. / The wiring for the first electric lights to be used by the company on the Pennsylvania Division was likewise done by Mr. Timmons and his force. In 1903, the Hudson Coal Company built a power plant at its Coalbrook Breaker, current from which was made available to the railroad company for power and light purposes. During the next year the shops, stations, offices, and other buildings were wired and equipped with electric service. / When electrically operated block signals were first put in use on the Pennsylvania Division, Mr. Timmons and his men strung the connecting wires, although Signal Department men handled the actual work of installing the signals. In 1917, the Telegraph and Signal Departments were consolidated and Mr. Timmons was appointed Signal Supervisor. He continued in this capacity until February 1, 1923, when he became Electrical Supervisor, the position he held at the time of his retirement, April 1, 1933. / Mr. Timmons, who resides at 79 Wyoming Street, Carbondale, is a member of The Delaware and Hudson Veterans' Association, the Masons, and attends the First Presbyterian Church of that city."

Here is the photograph of Frank C. Timmons that accompanies his biographical portrait in the October 1, 1933 issue, on page 147, of *The Delaware and Hudson Railroad Bulletin*:



Telegraph wires downed by a storm:

“TELEGRAPH WIRES DOWN. / The Postal Company’s Lines Suffer from the Storm. /

The storm of Saturday night did much damage to the telegraph wires in this vicinity, but delayed the railroad trains very little. The Jefferson Division trains were on time to-day, the Ontario a trifle behind and the early gravity trains a half hour late. The wires of the Postal Telegraph Company between this city and Scranton are down in several places, but the main line is all right in this vicinity, the greatest damage having occurred in the cities where other wires fell on telegraph line. The Postal expects to have a western wire to-day, but will accept no eastern message to-day. / The Western Union suffered considerably, also, and the linemen are out to-day finding the breaks and repairing them. Yesterday there was no communication with towns south from this city and this morning but one wire was open to Wilkes-Barre. / In Scranton the telegraph, telephone, electric light and street railway wires got crossed and tangled so that many electric switch boards were set afire, and the electric light company did not dare turn on their current. The Telephone Exchange caught fire several times, but was extinguished each time with bellows. / It is thought that all wires will be repaired by to-morrow.” (*Carbondale Leader*, January 26, 1891, p. 4)

The telephone can now be used on telegraph wires:

“A VALUABLE INVENTION. / By Its Use Telephones Can Be Used on Telegraph Wires. /

W. E. Tiffany, an employe of the Delaware & Hudson railroad at Binghamton has perfected a machine whereby the telephone can be used on a telegraph wire while telegraph messages are being sent. The invention will greatly facilitate the railroad and press services. Numerous efforts

have been made to utilize telegraph wires in this way, but this is the first that has proved practical. The distance has nothing to do with the work, as the principle of handling the train is the same as though the train was 100 miles long. The orders are not written down or telegraphed, the telephone being the only method used.” (*Carbondale Leader*, May 19, 1899, p. 5)

The telegraph is now sixty years old:

“ANNIVERSARY OF TELEGRAPHY. / Postal Telegraph Celebrates the First Message Sent and Its Own Progress. / Sixty years ago yesterday the first telegraph message was sent from Baltimore to Washington and just fifty years later the building at Broadway and Murray street, owned by the Postal Telegraph Company, was opened. To celebrate these two anniversaries Clarence H. Mackay, president of the Postal company, entertained at dinner at the Hardware Club last night the company’s general and assistant superintendents from all sections of the country, including California and Texas. There were 100 at the dinner, the other guests being the officers of the company. They were: / Col. A. B. Chandler, chairman of the directors; George C. Ward, general manager of the Commercial Cable Company; Charles R. Hosmer, vice-president of the Commercial Cable Company; W. H. Baker, general manager of the Postal Telegraph Cable Company, E. C. Bradley and C. C. Adams, vice presidents; E. C. Platt, treasurer; Fred Huntington, treasurer of the New York Telephone Company; John I. Waterbury and Col. George Harvey. / Handsome menus were presented as souvenirs. The cover had a picture of the Postal Telegraph Building on the front and the Commercial Cable Building on the back. Inside was a picture of Prof. Morse and the playbill of ‘The County Chairman,’ which the guests saw on Monday night as the guests of Mr. McKay. / President Mackay welcomed his guests in a speech in which he said that Prof. Morse lit the torch which now flashes the sparks of intelligence, progress and civilization over the continents and under the seas. Of the policy of his company Mr. Mackay said: / We ask no favors; we seek no subsidies, we require and expect no more than those equal privileges which make the heritage of American citizens, to perform the work which constitutes our contribution to civilization. Andrew Jackson once said that the most desirable and praiseworthy citizen he ever knew was a man who got rich minding his own business. That, gentlemen, is our policy. We may not get rich, but whatever results may accrue, and I am happy to say that they are so far satisfactory, we can and should, and will, if you please, mind our own business, pursuing the even tenor of our way and missing no opportunity to get all of the legitimate business that the earth and the seas can afford. / Speeches were also made by Col. A. B. Chandler, Vice-President George C. Ward of the Commercial Cable Company and Vice President Baker of the Postal Telegraph Company.” (Gritman scrapbook; Wednesday, May 25, 1904)

When the telegraph lines were extended north along the Jefferson branch (year?), there was a very small telegraph station at the Simpson viaduct, and Stanley Julius was the first operator therein.

First wireless Marconi message sent from a moving train:

1914: January 22: First wireless/ (Guglielmo) Marconi message from a moving train to a newspaper. message to *New York Times* from a DL&W train, the Lackawanna Civil Engineers Special, 35 miles east of Scranton; train going 64 miles per hour, carrying 500 members of the American Society of Civil Engineers from Hoboken, NJ, to Nicholson and back; message sent by George Cullen, passenger traffic manager; engineers disembarked at Nicholson to inspect the viaduct (then under construction). The DL&W built wireless radio towers at Scranton and Binghamton: On November 27, 1913, the first official wireless transmission was sent from Scranton to a train traveling 60 mph along the DL&W track toward Binghamton.

Report from the D&H for the 1900 volume of *The Railroad Telegrapher*:

The Railroad Telegrapher, Volume 17 1900 By Order of Railroad Telegraphers (U.S.) Page 744
The Delaware & Hudson Co. Pennsylvania Division ;— Hello 1 hello! This is the Pennsylvania Division of the D. & H. Co.'s R. R., away up in North Eastern Pennsylvania. We have been waiting and watching in vain to hear something from the boys before this, but life is full of disappointments. We therefore decided to make a trip over the line ourselves, and make you acquainted with the boys. At Nineveh Junction we have Mr. Carr, "WC." South Nineveh, Mr. Marsh. Center Village, Mr. Livingstone. East Windsor, Mr. Morris, days, but cannot remember night man's name. Windsor, Mr. Barrett and Mr. Barrett. State Line, Mr. Bates. Lanesboro, Mr. DePew. Jefferson Jct.—Mr. Flaherty, days, and Mr. Ferry, nights. From here we go to Carbondale, and at "CD" Erie dispatcher's we find: Messrs. McCoy, Purtell and O'Boyle, at "F. S." Fred. Moon at "J." (Carbondale Yard Office) The jolliest man on the line, Bro. M. F. O'Malley, days, and Mr. Grinnell, nights, at "FH." Bro. P. F. Kilker, days, and Jakey Solomon, nights, at "CY." (Carbondale Station) C. R. Smith, days, and Willis Moon, nights, at "MS." George Moon at "CA." A. W. Corbin and G. F. James at "ND." (Carbondale Dispatchers office) Dispatchers Tucker, Briggs, Nye, Parry, and Morgan, and copyists Rounds and Corbin. At Lookout Junction, Ed. Reardon. Mayfield, Bro. H. J. DeGraw. Jermyn, W. R. Dodson. Archbald, W. F. Davenport. Peckville, W. J. Broad and Mr. Hoffecker. Olyphant, Miss McKeene—wish we could say Sister; maybe we will some day. Dickson, J. W. Samson. Green Ridge, Bro. Pace, days, and Mr. Murray, nights. At Vine St., Bros. Rafter, Garrigan and Ryan. At Carbon St. Jct., Bros. McMasters and Corcoran. At Scranton, Bro. D. B. Parry. At Bridge St., Bro. Loftus. At Steel Works, Bro. Booth. Minooka, Messrs. Petersen and Davis. Minooka Jct., Messrs. Nye and Deebler. Moosic, Mr. Metz. Avoca, Mr. Sower. Pittston, Mr. Williams. Yatesville, J. M. Rosener. Laflin, Mr. Twist—not Oliver. Hudson, H. A. Twist, days, and Mr. Moore, nights. Miners' Mills, M. D. Moot. Parsons, F. M. Chase. Wilkesbarre, Mr. Pullins. Now, as you know the boys. I will tell you something about them next month, with a possible something about our Honesdale Branch, the once famous Gravity road, where we have Mr. Knapp at Rackett [sic] Brook. Mr. Rounds at Panther Bluffs. Mr. Chapman, at Fairview. Messrs. Williams and Stephenson at Waymart. Messrs. Sheesler, Chapman and Bishop at Honesdale. I will cut out for this time, and remain, Yours in S. O. & D.

Report from the Honesdale Branch of the D&H for *The Railroad Telegrapher*, 1907:

The Railroad Telegrapher, Volume 24, Part 1 1907 By Order of Railroad Telegraphers (U.S.) Page 810 Scranton Div., No. 87 Honesdale branch is giving us a write-up this month. That branch is one solid part of the D. H. for the O. R. T. Bros. Nellington, of division 63, has started organizing, and tackled the D. H. for a starter. Agent Hudson still on the vacant list at this writing. Guess Hud will have to stay there, without the management gets hold of an outsider that does not know what he is bumping up against. Agent South Scranton resigned to accept a more lucrative position with another road. There is a telegrapher on this division that informed the organizer that he wanted no O. R. T. committee to represent him in any manner, and he would have nothing to do with the O. R. T. That boy is just fifteen years behind the times. He belongs to the times when there was a surplus of telegraphers in the country, and it was necessary for an organizer to come and see the telegraphers after dark, or if he had the temerity to call in daylight the telegrapher would look all around the telegraph station to see if the section boss or any bigger boss was around, and if not take the organizer inside, pull down the curtains and lock the door, and then, with a scared look, say: Now, what do you want? Never mind, young fellow; the committee does not wish to represent "young mossbacks." It is hard enough for them to represent the old ones. COR. Honesdale Branch—I have not seen a single item from Honesdale Branch for two or three years, so will attempt a short write-up: Bros. Doyle and Brooks will soon be installed in the new tower at Lookout Junction. This will be an up-to-date plant when completed. There are 39 levers in now, and I understand there is to be eight or ten more put in. This should be an eight-hour job u soon as the four tracks are completed. Too bad the Honesdale Branch train service is not better. As it is the Honesdale boys cannot attend our meetings and get home the same night. If they had any show at all I'm sure they would do better than some of the main line boys, who have trains nearly every hour. Nons are as scarce as hen's teeth on the branch. Wish I could say the same of the Nineveh Branch. You fellows on Nineveh Branch would do well to follow the example set by the Honesdale Branch men. It is rumored that no coal will be run over the branch after May 1st until further notice.

Report from the D&H for *The Railroad Telegrapher*, 1914:

The Railroad Telegrapher, Volume 31, Part 1 By Order of Railroad Telegraphers (U.S.) 1914 Page 561. Delaware &, Hudson Ry., Div. No. 151. Pennsylvania. Division The local chairman wishes to take this opportunity to thank all of the boys who so kindly contributed towards the fine presents he received through Bro. Gibb, of Yatesville, consisting of a large easy chair and a tie pin. They came to him as a complete surprise, and he is wondering why the chair, as he never has time to use it, being the busiest man on this pike. When he is not taking care of his job at Moosic, he is out over the road looking for nons, and they are getting pretty scarce on this end of the road; about the only ones that can be found here, is when a new man strikes the pike, and Erny is after him on the first pay day. The one day "Historical" strike showed that this division was 100 per cent strong, not a click of the instruments after 11 :45 a. m. Every one said "GB" to the dispatcher and walked out. On the day of the strike I had the good fortune to be with the local chairman at Hotel Jermyn, Scranton, and if it had lasted another day I think the hotel would have had trouble with the bell boys, as they were about the busiest lot you ever saw, trying to keep

Danks on four telephones, interviewing reporters and answering Western Union and Postal messages all at the same time. Bro. Hanks was the busiest man in Scranton on that day without doubt. Any changes on this division? Yes—so many that it will be impossible to record them all here. Bro. Livingston has been appointed relief man for the Nineveh branch. Relief Dispatcher dune has been appointed night chief on the Susquehanna Division and I can assure him that although we are sorry to lose him here, we are all pleased to know that he is going to a more important place and among friends. The Susquehanna boys have a warm spot in their hearts for "Mike," and they will all help him make good up there. K. S. Reid, G. A. Artley and I. Madigan have been appointed trick dispatchers at Carbondale; all the boys from out on the road and everyone making goo 1. Bro. A. I. McLane from "WB" yard office, Wilkesbarre, to clerk in dispatcher's office. Our official family is now composed of former telegraphers entirely: C. A. Morgan, superintendent, former chief dispatcher; J. J. Rounds, trainmaster, former chief dispatcher; E. G. Knapp, assistant trainmaster, former chief dispatcher; P. F. Kilker, former night chief to day chief, and R. A. Seigle, day trick to night chief. These men have all graduated right up from the ranks on this road, and they are as good a bunch of officials as you can find in the United States. Our former Superintendent C. E. Burr has been appointed general superintendent, with headquarters at Albany, N. Y. The New York State two-day bill which was signed last May, was put into effect February 1st on Nineveh branch on this division. Fourteen men on branch now enjoying two days off per month. There are only two nons among them, whom we hope to have in the fold before another month rolls by. Three new members taken in on February 1st. Only five nons on the division. Boys, "get busy," look them up. If you do not know who they are, ask your local chairman, he will be only too glad to tell you, also give you blanks to help line them up. Bro. L. J. Speicher, Hudson tower days, off five weeks on account of sickness, was relieved by Extra Kittle. P. F. McDonald bid in third "WB" yard. Hope to call him "Bro." next write-up.

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